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Mother-Grandmother and Mother-Father Coparenting Across Time among Mexican-Origin Adolescent Mothers and Their Families

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Abstract

The current study examined mothers' reports of coparenting relationship dynamics (i.e., conflict, communication) within and between mother-father and mother-grandmother subsystems from 10 months post-partum to 5 years post-partum among 178 Mexican-origin teen mothers (M age = 16.78 years; $SD = 1.00$). Specifically, *within* subsystems, more frequent mother-father coparenting conflict was associated with less frequent mother-father coparenting communication from 10 months to 5 years post-partum, and more frequent mother-father coparenting communication was associated with less frequent mother-father conflict from 3 to 4 years post-partum. Further, more frequent mother-grandmother coparenting communication was associated with less frequent mother-grandmother conflict from 10 months to 2 years post-partum. Regarding relations *across* subsystems, more frequent mother-father coparenting conflict was associated with more frequent mother-grandmother conflict from 10 to 24 months post-partum, as well as from 3 to 4 years post-partum. Findings have implications for future interventions focused on coparenting relationships within the context of adolescent parenthood.

Keywords

adolescent pregnancy; coparenting; family dynamics; Hispanic/Latino/a; longitudinal research

The rate of adolescent pregnancy has decreased in the past decade across all ethnic and racial groups, but the number of births among Latina adolescents is still more than double the rate of non-Latina black adolescents, and almost triple the rate of non-Latina white adolescents (Martin et al., 2011). Furthermore, among all ethnic and racial groups in the U.S., Mexican-origin adolescents face the highest risk for pregnancy during adolescence (Martin et al., 2011). Additionally, in 2010 the number of Latinos in the U.S. reached 16.3%

of the total population, and accounted for over 56% of the nation's growth (Passel, Cohn & Lopez, 2011). Given this visible increase and prevalence of the Latino population, coupled with the disproportionate number of births to Mexican-origin adolescents, it is important to focus on processes that impact Mexican-origin adolescent mothers, their young children, and their family members as they navigate through pregnancy and parenting.

One such process is *coparenting*, which is the shared relationship between two or more adults who assume responsibility for children's care and upbringing (McHale & Irace, 2011). Although research on coparenting is still in its infancy, there has been considerable growth in this area within the last two decades (McHale & Lindahl, 2011), particularly in terms of the links between coparenting and children's and coparents' outcomes. For example, in terms of children's outcomes, previous work indicated that greater coparenting competitiveness was associated with infants' less secure attachment to their parents (Caldera & Lindsey, 2006); greater hostile-withdrawn coparenting was related to preschool children's greater delinquency, withdrawal, anxiety, and depression (Katz & Low, 2004); higher coparenting conflict was linked with young children's decreased math scores, literacy scores, and social skills (Cabrera, Scott, Fagan, Steward-Streng, & Chien, 2012); and higher supportive coparenting was linked with children's positive adjustment, more broadly (Teubert & Pinquart, 2010). In terms of coparents' outcomes, previous research has indicated that a lower quality coparenting relationship (e.g., undermining) between mothers and fathers was associated with more depressive symptoms and parenting stress, and less parenting efficacy (Solmeyer & Feinberg, 2011), as well as less father involvement (Carlson, McLanahan, & Brooks-Gunn, 2008). In addition to mother-father coparenting relationships and outcomes, other work examined whether coparenting between mothers and their own mothers (i.e., children's grandmothers) was related to coparents' outcomes. Findings indicated that greater coparenting quality was associated with mothers' (Kalil, Spencer, Spieker, & Gilchrist, 1998) and grandmothers' decreased depressive symptoms (Caldwell, Antonucci, & Jackson, 1998).

Despite the emerging body of literature indicating that features of the coparenting relationship have implications for individuals' adjustment, little is known about how aspects of the *adolescent mother-grandmother* coparenting relationship and the *adolescent mother-father* coparenting relationship are associated with one another over time. Given that these relationships among coparents do not occur in isolation from one another, examining the family system more holistically can provide a more accurate reflection of adolescent mothers' experiences. Guided by family systems theory (Cox & Paley, 1997), the current study examined the extent to which (a) mothers' reports of the frequency of coparenting communication and conflict were associated with each other over time *within* the mother-grandmother subsystem and *within* the mother-father subsystem, and (b) mothers' reports of the frequency of coparenting communication and conflict *across* the mother-grandmother and mother-father subsystems were associated with each other over time.

Understanding more about coparenting among various coparents as young mothers navigate parenting during the developmental period of adolescence is important. Adolescence is characterized by numerous normative developmental processes, including an increased desire for autonomy, greater emphasis on acceptance from similar-aged peers, and the search

for an understanding of self (Erikson, 1968; De Goede, Branje, Delsing, & Meeus, 2009), that may have implications for their coparenting relationships. Adolescents' increased desire for autonomy, for example, may conflict with their need for support from their mothers as they navigate being a young parent. Further, the salience of peer relationships in adolescence may mean that adolescent mothers place a strong emphasis on their coparenting relationship with their child's father, above their coparenting relationship with their mothers. Because adolescent mothers are navigating normative developmental tasks while establishing coparenting relationships with multiple coparents, this is a unique developmental context to examine coparenting and one that is likely to be distinct from the context of adult coparenting relationships.

The Family System in Families with Adolescent Mothers

Family systems theory (Cox & Paley, 1997; Minuchin, 1985) proposes that a family is a system composed of interconnected subsystems that impact each other. Thus, one way to conceptualize the complex structure of families with an adolescent mother is to view the family system as being composed of multiple subsystems, including the adolescent mother and the child's father (i.e., mother-father subsystem), and the adolescent mother and the child's grandmother (i.e., mother-grandmother subsystem). Although few studies have examined the coparenting relationship between unmarried adolescent mothers and fathers (Pittman & Cooley, 2011), related studies have found that various aspects of the adolescent mother-father subsystem are related to children's adjustment. For example, children with adolescent fathers had significantly higher levels of maladjustment (e.g., worse health, and lower behavioral and cognitive scores) than children with adult fathers, but these negative effects appeared to be attenuated by positive aspects of the mother-father relationship (Mollborn & Lovegrove, 2011). In addition, adolescent mother-father conflict, in general, has been significantly associated with less father engagement with infant children (Fagan, 2013), and adolescent fathers are more likely to stay involved in their child's lives if they have a supportive relationship with the child's mother (Cutrona, Hessling, Bacon, & Russell, 1998). Thus, an examination of the mother-father coparenting relationship is warranted, as it could provide additional insight into relationship dynamics in this high-risk population.

In addition to the child's father, it is also valuable to consider other coparents, such as children's grandmothers. A recent review highlighted that grandparents are being increasingly recognized as important components of family structures, both within three-generation families in which grandparents live with grandchildren, as well as in the context of non-resident grandparents (Dunifon, 2013). Grandmothers, in particular, have been found to be especially influential to their daughters as they navigate pregnancy during adolescence (Oberlander, Black, & Starr, 2007; Pittman & Coley, 2011). Furthermore, grandmothers' involvement is likely to be particularly relevant in Latino families, who tend to adhere more strongly to the value of familism, which involves strong investment and attachment to family (Knight et al., 2010; Sabogal, Marín, Otero-Sabogal, Vanoss Marin, & Perez-Stable, 1987). One aspect of familism involves the notion that grandparents may coparent grandchildren, especially in times of crisis or transition (Williams & Torrez, 1998), such as the transition to parenting during adolescence. Indeed, prior empirical work with Latina adolescent mothers provided support for the influential role of grandmothers, such that grandmothers'

involvement was associated with mothers' sensitivity and affect toward their children among coresiding mothers and grandmothers (Contreras, 2004). Given the potentially important role of grandmothers for adolescent mothers who are transitioning to parenthood, the mother-grandmother coparenting relationship is another important subsystem on which to focus attention in terms of both indirect and direct influences on young children's well-being.

Frequency of Coparenting Communication and Conflict within Each Subsystem over Time

Feinberg (2003) noted that coparenting consists of four related but distinct components that include agreement or disagreement on child-related issues (e.g., discipline, behavioral expectations, educational standard), support or undermining of the coparenting role (e.g., acknowledging one another's contributions, or conversely, criticizing or blaming one another), division of child-related labor (e.g., childcare), and the joint management of family interactions (e.g., coparenting conflict, communication). The focus in the current study is on the component of coparenting that pertains to the joint management of family interactions with a specific focus on the frequency of coparenting conflict and of coparenting communication.

Family systems theory (Cox & Paley, 1997; Minuchin, 1985) proposes that once subsystems are organized, features of the subsystem are maintained via feedback that enters the subsystem and guides subsequent behavior. Cox and Paley (1997) note that when family members violate shared family rules or values, other family members may provide feedback that regulates negative behavior. In terms of the features of the subsystem that involve the coparenting relationship, it is possible that more frequent coparenting communication allows the opportunity for feedback that regulates any negative behavior; therefore, less coparenting conflict may occur over time. Similarly, when coparents experience more frequent coparenting conflict, feedback may be diminished and less coparenting communication would be expected over time. No previous work, to our knowledge, has assessed the relation between the frequency of coparenting conflict and communication over time. Nevertheless, similar work that examined correlations between coparenting conflict and positive coparenting (e.g., support, decision-making) indicated that diminished feedback results from coparenting conflict. For instance, in a study of adolescent mothers and fathers, as parents reported more conflict in their coparenting relationship, they also tended to report less coparenting cooperation (Sheftall, Schoppe-Sullivan, & Futris, 2010). In addition, in a study of married adult parents, as mothers and fathers reported more coparenting conflict, they tended to demonstrate a lower ability to solve a problem regarding a child-related topic during an observational task (Margolin, Gordis, & John, 2001).

The current study builds on this prior cross-sectional work by simultaneously examining whether (a) mothers' reports of more frequent coparenting conflict are associated with less frequent coparenting communication a year later, and (b) mothers' reports of more frequent coparenting communication are associated with less frequent coparenting conflict a year later. Based on notions from family systems theory (Cox and Paley, 1997), and prior

empirical work with related constructs (i.e., Margolin et al., 2001; Sheftall et al., 2010), we hypothesized that *within* the mother-father subsystem and *within* the mother-grandmother subsystem, higher frequency of coparenting conflict would be associated with less frequent coparenting communication over time, and that higher frequency of coparenting communication would be associated with less frequent coparenting conflict.

Frequency of Coparenting Communication and Conflict Across Subsystems

Family systems theory (Cox & Paley, 1997; Minuchin, 1985) suggests that functioning in one subsystem can influence functioning in another subsystem; however, given that family systems theory does not posit the specific ways in which a subsystem may be associated with another subsystem, it is necessary to draw from other theoretical perspectives and prior work. Particularly relevant is the compensation perspective (Edwards & Rothbard, 2000), in which individuals compensate for a poor relationship or less positivity in one domain by increasing the quality of the relationship or positivity in another domain. In the context of the current study, it is possible that adolescent mothers compensate for high levels of conflict or low levels of communication with one coparent by increasing communication or decreasing conflict with a different coparent over time. Prior work has found support for the compensation perspective, such that non-parenting adolescents compensated for highly conflictual parent-parent subsystem relationships by increasing their warmth toward younger siblings (Sheehan, Darlington, Noller, & Feeney, 2004).

A contrasting possibility, which is consistent with a learning perspective (e.g., Parke et al., 1988), and has also been referred to as a spillover effect (e.g., Edwards & Rothbard, 2000), is that adolescent mothers may learn to coparent using a conflictual or communicative pattern with one coparent and then implement this same pattern in their coparenting relationship with a different coparent. More specifically, if the learning/spillover effect is supported, mothers' reports of more frequent conflict (or communication) in one subsystem will be associated with mothers' reports of more frequent conflict (or communication) in the other subsystem over time. Empirical support for the application of a learning/spillover perspective to family relationships has been provided by prior work. For instance, Kim and colleagues found that parent-child conflict was positively associated with child-sibling conflict (Kim, McHale, Osgood, & Crouter, 2006); similarly, Derkman and colleagues found that features of the adolescent-sibling relationship (e.g., adolescents' reports of warmth from the sibling) were associated with features of the adolescent-parent relationship (e.g., adolescents' reports of warmth from the parent; Derkman, Engels, Kuntsche, van der Vorst, & Scholte, 2011). Thus, the current study examined two competing hypotheses to test whether the associations between the frequency of coparenting conflict and communication across mother-father and mother-grandmother subsystems would support a compensation perspective (i.e., negative associations over time) or a learning/spillover perspective (positive associations over time).

Current Study

Coparenting relationships have been linked to important child and coparent outcomes (Caldwell et al., 1998; Katz & Low, 2004; Solmeyer & Feinberg, 2011), and Latina adolescents have the highest rates of teenage pregnancy (National Campaign to Prevent Teen and Unplanned Pregnancy, 2016), but we know little about the coparenting relationships of Mexican-origin adolescent mothers and the multiple significant others with whom they coparent. Scholars have recommended that “theoretically driven studies that incorporate richer assessment, include all coparents, and follow the family over time are very much needed” (p. 72; Jones & Lindahl, 2011). Following this recommendation, the current study used a rigorous cross-lagged longitudinal design to assess the frequency of coparenting conflict and communication among the mother-father and the mother-grandmother subsystems from 10 months to 5 years post-partum. This enabled an examination of coparenting over time while accounting for the effects of coparenting at earlier time points; furthermore, this approach provided a preliminary examination of the directionality of associations (Curran, 2000), which has not been previously examined with this population.

In the current study, we examined the processes by which mothers’ reports of the frequency of coparenting communication and conflict were associated with one another over time *within* two coparenting subsystems (i.e., mother-father and mother-grandmother). Based on family systems theory (Cox and Paley, 1997), and prior empirical work (e.g., Sheftall et al., 2010), we hypothesized that more frequent coparenting conflict would be associated with less frequent coparenting communication, and that more frequent coparenting communication would be associated with less frequent coparenting conflict. In addition to processes within subsystems, we also examined coparenting *across* two subsystems. We examined two competing hypotheses: (a) consistent with a learning/spillover perspective (Edwards & Rothbard, 2000; Parke et al., 1988), more frequent conflict (or communication) in one subsystem would be associated with more frequent conflict (or communication) in the other subsystem, or (b) consistent with a compensation perspective (Edwards & Rothbard, 2000), more frequent conflict (or less frequent communication) in one subsystem would be associated with less frequent conflict (or more frequent communication) in the other subsystem.

Method

Participants

Data for the current study were from six waves of a prospective longitudinal study of 204 Mexican-origin adolescent mothers and their mother figures (e.g., biological mother, aunt, boyfriend’s mother) conducted from 2007 to 2013 (Umaña-Taylor, Guimond, Updegraff, & Jahromi, 2013). The current study focused on adolescent mothers’ perspectives on coparenting communication and conflict. Data collection occurred when mothers were in their third trimester of pregnancy (Wave 1; W1), 10 months postpartum (W2), 2 years postpartum (W3), 3 years post-partum (W4), 4 years post-partum (W5), and 5 years post-partum (W6). The majority of families participated across all six waves (i.e., 96% at W2, and 88% at W3, W4, W5, and W6). For the current study, 24 families were excluded in which mother figures were not adolescents’ biological mothers (referred to as grandmothers from this point

forward), given that coparenting processes of a child might vary based on whether the coparent was the child's grandmother or a different family member (e.g., a great aunt, unrelated female serving as a mother figure). Further, two families were excluded in which mothers reported no contact with the child's biological father across all waves, given that coparenting is not possible if the two individuals serving as coparents have no contact. The 24 families that were excluded were not significantly different (based on an independent samples *t*-test for continuous variables and chi-square tests of independence for categorical variables) on W1 demographic variables (i.e., mothers' age, mothers' school status, mothers' nativity, fathers' nativity, grandmothers' nativity, and family income). Thus, the analytic sample for the current study included 178 families.

At W1, mothers were, on average, 16.78 years old ($SD = 1.00$), and the majority were attending school (63%), and U.S. born (66%). Although not directly included in the present study, grandmothers were an average of 40.82 years old ($SD = 5.18$, range = 28.08-55.33), and the majority were foreign-born (69%). The average family income at W1 was \$27,353 ($SD = \$20,097$), which was calculated by creating a sum of grandmothers' income, additional funds contributed to the household by others, and public financial assistance (e.g., food stamps). Although the children's fathers did not directly participate in the study, mothers reported that they were an average of 18.92 years old ($SD = 2.83$, range = 14.00-30.00), approximately half were foreign-born (51%), and a majority were of Mexican origin (89%). Of the adolescent mothers who participated at each wave, the number who lived with their mothers was 88% (W1), 75% (W2), 64% (W3), 54% (W4), 50% (W5), and 41% (W6); and the number of adolescent mothers who lived with their child's father was 20% (W1), 33% (W2), 36% (W3), 33% (W4), 30% (W5), and 27% (W6). Although the majority of mothers who participated in the study at each wave did not live with their child's father, most mothers and fathers remained in contact after their child was born (i.e., 92% at W2, 95% at W3, 81% at W4, 76% at W5, and 72% at W6).

Procedure

Participants were recruited from community agencies and high schools in a Southwestern metropolitan area. Eligibility criteria included that teens had to be of Mexican origin, 15 to 18 years old, currently pregnant, and not legally married when the study began. At each wave, adolescent mothers younger than 18 years of age provided assent and a parent/guardian provided informed consent, and adolescent mothers 18 years of age and older provided informed consent. Interviews were conducted in participants' homes in their preferred language, and most participated in English (61%). Interviews in Spanish were conducted by bilingual research assistants. Participants received \$25 for participation at W1, \$30 at W2, \$35 at W3, \$40 at W4, \$50 at W5, and \$60 at W6. All procedures were approved by the university's Human Subjects Review Board.

Measures

We followed recommendations outlined by Knight, Roosa, and Umaña-Taylor (2009) for translating items into Spanish for all study measures. Specifically, we translated, back-translated, and followed a process of decentering to arrive at our final English and Spanish items. In the process of decentering, both the original language version of the measure (i.e.,

English) and the target language version (i.e., Spanish) were modified until both versions were semantically equivalent and relevant in the languages in which the measure would be administered. The final translations were reviewed by Mexican-origin individuals who were native speakers to ensure cultural validity.

Mothers' reports of the frequency of coparenting conflict—The 4-item conflict subscale of the Quality of Coparental Communication Scale (Ahrns, 1981) was used to assess adolescent mothers' perceptions of the frequency of conflict regarding parenting issues (i.e., coparenting that results in an argument, involves hostility and anger, is stressful and intense, and/or involves basic differences of opinion) with children's grandmothers (e.g., "When you and your mother discuss parenting issues, how often does it result in an argument?") and children's fathers (e.g., "When you and your child's biological father discuss parenting issues, how often does it result in an argument?"). Mothers who reported that they had no contact with fathers at a particular wave did not provide responses for coparenting conflict with fathers at that particular wave. Responses ranged from (1) *Never* to (5) *Always*, and higher scores indicated a higher frequency of coparenting conflict. Support for the construct validity and reliability of this measure had been demonstrated in previous work with divorced and separated mothers and fathers (e.g., Bonach, 2005). In the current study, Cronbach's alphas for the frequency of mother-grandmother coparenting conflict across waves ranged from .85 to .90 (English version) and .78 to .86 (Spanish version). Cronbach's alphas for the frequency of mother-father coparenting conflict across waves ranged from .86 to .94 (English version) and .81 to .89 (Spanish version).

Mothers' reports of the frequency of coparenting communication—A 7-item shortened version (modified by Madden-Derdich, 2002, to be relevant to the coparenting relationships of adolescent mothers) of the 10-item coparenting interaction scale (Ahrns, 1981) was used to assess adolescent mothers' perceptions of the frequency of communication regarding child-rearing issues with children's grandmothers (e.g., "How often do you talk to your mother about major decisions regarding your child's life?") and children's fathers (e.g., "How often do you talk to your child's biological father about major decisions regarding your child's life?"). Mothers who reported that they had no contact with fathers at a particular wave did not provide responses for coparenting communication with fathers at that particular wave. Responses ranged from (1) *Never* to (5) *Always*, and higher scores indicated a higher frequency of coparenting communication. Using the original 10-item measure with a sample of divorced parents, Cronbach's alpha was .88 for mothers and .89 for fathers (Ahrns, 1981); the 7-item version achieved a Cronbach's alpha of .92 with Latina adolescent mothers and their own mothers (Madden-Derdich, 2002). In the current study, Cronbach's alphas for the frequency of mother-grandmother coparenting communication ranged from .89 to .93 (English version) and .85 to .92 (Spanish version) across waves. Cronbach's alphas for the frequency of mother-father coparenting communication ranged from .95 to .98 (English version) and .91 to .96 (Spanish version) across waves.

Control Variables—Previous work has noted that coresidency varies over time in the context of adolescent parenthood, such that many adolescent mothers initially live with their

families of origin (Acs & Koball, 2003) and less than 10% of adolescent fathers live with their child beyond the first few years of his/her life (Howard, Lefever, Borkowski, & Whitman, 2006). Further, prior work with Latina adolescent mothers, grandmothers, and mothers' partners indicated that the way in which grandmothers and partners impacted mothers' parenting was moderated by coresidency (Contreras, 2004). Therefore, because coresidency could impact the frequency with which adolescent mothers communicate and experience conflict with a coparent, the current study included mother-father and mother-grandmother coresidency at each wave of data collection as covariates. At W1, adolescents reported the name of their mother and the name of their child's biological father, and at each wave adolescents reported the names of all individuals who lived in their home; the variables *mother-father coresidency* and *mother-grandmother coresidency* were derived from these data, with coresidency being coded as 0 = *Do Not Live Together*, 1 = *Live Together*.

Given the variability that exists among Mexican-origin individuals in the U.S. with respect to nativity status (Ennis, Rios-Vargas, & Albert, 2011), we included grandmothers' country of birth, fathers' country of birth, and mothers' country of birth as controls to account for any potential impact on coparenting processes; nativity was coded as 0 = *born outside the U.S.*, 1 = *born in the U.S.* Finally, given prior work linking mothers' age with coparenting constructs (Kamp Dush, Kotila, & Schoppe-Sullivan, 2011), adolescent mothers' age was included as a control.

Results

Prior to testing our hypothesized model, correlations, means, and standard deviations were computed for all key study variables and controls at W1, W2, and W3 (Table 1), and W4, W5, and W6 (Table 2). The hypothesized model was tested with path analysis via structural equation modeling using Mplus version 7.11 (Muthén & Muthén, 2013). A model was specified that included autoregressive (i.e., stability) paths across all waves for the frequency of mother-father coparenting communication, mother-father coparenting conflict, mother-grandmother coparenting communication, and mother-grandmother coparenting conflict, as well as cross-lagged paths from all coparenting variables at a particular wave (e.g., W2) to all coparenting variables at the next wave (e.g., W3; see Figure 1 for conceptual model). In addition, grandmothers' nativity, fathers' nativity, mothers' nativity, and mothers' age at W1 were specified as covariates predicting W2 coparenting variables. Finally, mother-grandmother coresidency and mother-father coresidency at each wave were included as covariates predicting all coparenting variables at the following wave.

Missing Data

Missing data for the analytic sample of 178 participants were handled using full information maximum likelihood (Arbuckle, 1996), which is a recommended approach to handling missing data (Enders, 2013). Two primary fit indices were used to examine overall model fit: the comparative fit index (CFI) and the root-mean-square-error of approximation (RMSEA). Model fit was considered to be good (acceptable) if the CFI was greater than or equal to .95 (.90) and the RMSEA was less than or equal to .05 (.08; Hu & Bentler, 1999). In addition, an independent samples *t*-test (for family income, mothers' age, and mothers' school status),

and chi-square tests of independence (for mothers' nativity, fathers' nativity, and grandmothers' nativity) were conducted to test for potential selection effects between mothers who participated in the study at the last wave (i.e., W6; 148 mothers) versus those who did not participate at W6 (i.e., 30 mothers). Results indicated that there were no significant differences on any demographic variable at W1 (i.e., when all participants provided data) between mothers who participated at W6 and mothers who did not participate at W6.

Nested Model Comparisons

Nested model comparisons were used to examine whether associations among model constructs were stable across waves (Newsom, Jones, & Hofer, 2012). In this approach, a less constrained model is compared to a more constrained model (i.e., constraints were added across time), and a chi-square difference test is performed. For example, the relation between W2 and W3 mother-father coparenting communication is constrained to be equal to the relation between W3 and W4 mother-father coparenting communication, W4 and W5 mother-father communication, and between W5 and W6 mother-father communication. If the chi-square difference test is significant, it indicates that the relation between mother-father coparenting communication is significantly different between each wave, and should not be constrained to be equal across waves. Therefore, the constraints should be removed prior to imposing the next set of equality constraints. However, if the chi-square difference test is not significant, the equality constraints can be maintained in subsequent testing. This process is repeated until all sets of constraints in the model are tested.

Test of the Hypothesized Model

The initial hypothesized model allowing all estimates to vary across waves (i.e., unconstrained model) demonstrated marginally acceptable fit: [$\chi^2 (df = 298) = 482.01, p < .001$; CFI = .88; RMSEA = .06 (90% C.I.: .05 - .07)]. Next, a series of constrained models were tested in which each set of equality constraints were imposed, and a chi-square difference test was performed (see Table 3). The final model had marginally acceptable fit: [$\chi^2 (df = 385) = 567.54, p < .001$; CFI = .88; RMSEA = .05 (90% C.I.: .04 - .06); see Figure 2], and indicated that each coparenting variable was stable over time. Several hypothesized associations emerged both within subsystems and across subsystems.

Findings within subsystems—First, regarding relations within the mother-*father* subsystem, as hypothesized, mothers' reports of more frequent mother-father conflict was associated with mothers' reports of less frequent mother-father communication a year later; this significant finding emerged consistently from W2 to W3, W3 to W4, W4 to W5, and W5 to W6. In contrast, mothers' reports of more frequent mother-father communication only predicted mothers' reports of less frequent mother-father conflict from W4 to W5.

Regarding associations within the mother-*grandmother* subsystem, consistent with expectations, mothers' reports of more frequent mother-grandmother communication at W1 were associated with mothers' reports of less frequent mother-grandmother conflict at W2; however, mothers' reports of mother-grandmother conflict did not predict mothers' reports of mother-grandmother communication at any wave.

Findings across subsystems—In terms of relations across coparenting subsystems, results supported the learning/spillover perspective (Edwards & Rothbard, 2000; Parke et al., 1988), such that mothers' reports of more frequent mother-father coparenting conflict were associated with mothers' reports of more frequent mother-grandmother coparenting conflict from W2 to W3 and W4 to W5. Mothers' reports of coparenting in the mother-grandmother subsystem did not predict mothers' reports of coparenting in the mother-father subsystem for coparenting conflict or communication at any of the waves.

Discussion

Coparenting is an important process that has implications for adjustment among children and coparents (McHale & Irace, 2011). The present study had several aims. First, we examined the consistency over time in coparenting within subsystems. Findings indicated that the frequency of each type of coparenting was positively associated with the frequency of its respective type of coparenting at the following wave among both mother-grandmother and mother-father subsystems from 10 months post-partum to 5 years post-partum. The stability of mothers' reports of coparenting over a *five-year period* among two different subsystems of coparents underscores the importance of *early* intervention that encourages and supports communication and that can lead to effective management of conflict. Without intervention, if coparenting relationships are characterized by more frequent conflict and less frequent communication, then these characteristics may continue several years after children are born, which could pose significant risks for coparents' and children's outcomes.

In addition to examining stability, we tested whether mothers' reports of the frequency of coparenting communication predicted mothers' reports of the frequency of coparenting conflict, both *within* and *across* the mother-father and mother-grandmother subsystems over time. Regarding within-system coparenting, some expectations were supported (e.g., more frequent mother-father conflict was associated with less frequent communication), and other expectations were only partially supported (e.g., mother-grandmother communication predicted less frequent mother-grandmother conflict only from 10 months to 2 years post-partum, but not between any other years post-partum). In terms of across-system coparenting, findings highlighted that mothers' reports of the mother-father coparenting relationship predicted changes in mothers' reports of the mother-grandmother coparenting relationship over time. In the discussion that follows, findings are discussed in terms of (a) coparenting conflict as a predictor of coparenting communication within subsystems, (b) coparenting communication as a predictor of coparenting conflict within subsystems, and (c) the importance of mother-father coparenting in the family system.

Coparenting Conflict as a Predictor of Coparenting Communication within Subsystems

We hypothesized that mothers' reports of more frequent coparenting conflict would be associated with mothers' reports of less frequent coparenting communication over time within subsystems. Indeed, our expectations were supported for the mother-father coparenting subsystem. In particular, more frequent mother-father conflict was associated with less frequent communication from 10 months to 2 years post-partum, as well as 2 to 3 years post-partum, 3 to 4 years post-partum, and 4 to 5 years post-partum. Findings build on

prior cross-sectional data by indicating that more frequent mother-father coparenting conflict is not only associated with less frequent coparenting cooperation (Sheftall et al., 2010) and coparenting problem solving (Margolin et al., 2001), but also with less frequent mother-father coparenting communication consistently from the young child's infancy through five years of age. Given the rigorous analytic approach of the current study (i.e., longitudinal cross-lagged model that accounted for prior levels of coparenting conflict and communication), the results provide strong support for the notion that mothers' perceptions of mother-father coparenting conflict poses a significant risk to their coparenting communication over time. Given that positive forms of coparenting, such as communication, have been linked with children's greater well-being (Teubert & Pinquart, 2010), and parents' improved mental health and parenting efficacy (Solmeyer & Feinberg, 2011), findings highlight that early intervention efforts that target mother-father conflict could have important implications for family well-being. This finding is particularly relevant among families with *adolescent* coparents because adolescent fathers are more likely to stay involved in their child's life when they have a supportive relationship with the child's mother (Cutrona et al., 1998). Further, the increased risk for maladjustment faced by children of adolescent parents has been shown to be reduced by positive forms of coparenting (Mollborn & Lovegrove, 2011). Based on the results of the current study, future work should more directly examine whether mothers' reports of coparenting conflict is associated with lower levels of father engagement through decreased coparenting communication. Results suggest that intervening early with a focus on reducing mother-father coparenting conflict could significantly improve mother-father coparenting communication and overall positive outcomes in family systems that include adolescent parents.

Although more frequent coparenting conflict predicted less frequent coparenting communication within the mother-father subsystem, this association was not significant at any wave within the mother-grandmother subsystem. One possibility is that because of the modest sample size in the present study, there was not enough power to detect these associations over and above the significant effects within the mother-father subsystem across waves. An alternative possibility is that there may be less boundary permeability in mother-grandmother coparenting communication compared to mother-father coparenting communication. Family systems theory (Cox & Paley, 1997; Minuchin, 1985) suggests that subsystems have boundaries, which are implicit and explicit rules of interactions that are established and maintained by subsystem members. It is possible that the boundaries involved in mother-father coparenting communication are more permeable and less established, such that more frequent coparenting conflict significantly decreased mother-father coparenting communication over time. Further, given the developmental context, it may be easier for adolescent mothers to abandon relationships and communication with intimate partners (e.g., the child's father), than it is to do so with their mothers, who they rely on for support. Additionally, the mother-grandmother subsystem may have a more established, and less permeable boundary involved in their coparenting communication that is unaffected by coparenting conflict. It is possible that regardless of coparenting conflict, mothers may maintain a strict, protected boundary around their coparenting communication relationship because of a greater endorsement of familism values (i.e., a strong investment

and attachment to family; Knight et al., 2010; Sabogal et al., 1987). Given that these ideas are speculative, future research is warranted that more directly assesses (a) subsystem members' perceived boundary expectations and rules surrounding their coparenting relationship, and (b) whether familism values play a role. A better understanding of the perceived boundaries involved in coparenting over time and across subsystems, and how cultural values may inform these expectations may elucidate additional areas that can be targeted to improve family functioning among families in which a pregnancy has occurred during adolescence.

Coparenting Communication as a Predictor of Coparenting Conflict within Subsystems

In addition to expectations regarding the association between mothers' reports of more frequent coparenting conflict and mothers' reports of less frequent coparenting communication, we also hypothesized that more frequent coparenting communication would be associated with less frequent coparenting conflict over time within subsystems. We found limited support for this expectation, such that more frequent mother-grandmother communication was associated with less frequent mother-grandmother conflict from 10 months to 2 years post-partum, and more frequent mother-father communication was associated with less frequent coparenting conflict from 3 years to 4 years post-partum. More frequent coparenting communication may provide opportunities for coparents to be open and provide feedback to each other, which decreases the subsequent conflict they experience when discussing issues regarding the child. Of note, the relation between more frequent coparenting communication and less frequent conflict only existed among mothers and grandmothers early after children were born (i.e., 10 months to 2 years post-partum), and among mothers and fathers several years after children were born (i.e., 3 years to 4 years post-partum). It appears that communication between mothers and grandmothers may be especially important at early times of transition, such as the transition from infancy to toddlerhood, whereas communication between mothers and fathers may be especially influential during later transitions, such as children's transition into preschool. This idea is speculative, however, because we do not have data to confirm that, indeed, children were transitioning into preschool. Thus, future work would benefit from more direct examination of this idea, as well as to determine if this finding is replicated with other samples.

The Importance of Mother-Father Coparenting in the Family System

Another aspect of the current study was to examine the processes by which mothers' reports of coparenting relationship qualities across two subsystems were associated with one another over time. In particular, we tested competing perspectives to examine whether (a) consistent with a learning/spillover perspective (Edwards & Rothbard, 2000; Parke et al., 1988), mothers' reports of more frequent conflict (or communication) in one subsystem was associated with mothers' reports of more frequent conflict (or communication) in the other subsystem over time, or (b) consistent with a compensation perspective (Edwards & Rothbard, 2000), mothers' reports of more frequent conflict (or less frequent communication) in one subsystem was associated with mothers' reports of less frequent conflict (or more frequent communication) in the other subsystem over time. Results were consistent with a learning/spillover perspective (Edwards & Rothbard, 2000; Parke et al., 1988), such that a higher frequency of mother-father coparenting conflict was associated

with a higher frequency of mother-grandmother conflict from 10 months to 2 years post-partum and 3 to 4 years post-partum.

Although the findings support a spillover effect, the exact reasons *underlying* this effect are unclear. It is possible that mothers turned primarily to fathers to coparent their children, and they learned a conflictual pattern of coparenting that spilled over into the coparenting relationship with grandmothers. Alternatively, it is also possible that as grandmothers witnessed coparenting conflict between mothers and fathers, they became frustrated with their daughters for having conflictual relationships with fathers, which then spilled over into their coparenting relationship, resulting in more frequent mother-grandmother coparenting conflict. An important future research direction will be to conduct mixed-method research with mothers, grandmothers, and fathers to better understand the reasons underlying the associations between mother-father coparenting conflict and mother-grandmother coparenting conflict.

Mother-daughter relationships that are characterized by high levels of coparenting conflict are particularly damaging to adolescent mothers because their own mothers are a critical source of support as they parent during adolescence (Oberlander et al., 2007). Given that more frequent coparenting conflict has been associated with poorer mental health for mothers and grandmothers (Caldwell et al, 1998; Kalil et al., 1998), as well as children (e.g., Cabrera et al., 2012), it is important to address mother-father coparenting conflict in order to potentially reduce the learning/spillover effect and subsequent impacts on adolescent mothers' coparenting with their own mothers. Providing strategies that enable adolescent mothers and fathers to reduce conflict as they discuss parenting issues may be an important area to explore for future intervention efforts.

In addition, findings are consistent with prior work noting that similar-aged peers become particularly important during adolescence (De Goede, Branje, Delsing, & Meeus, 2009). Given the developmental period of adolescence, and the importance of peers, it seems that adolescent mothers' coparenting relationship with their child's father is a particularly influential aspect of the family system that drives changes in the mother-grandmother subsystem over time. This finding is consistent with family systems theory (Cox & Paley, 1997) which posits that subsystems are interdependent and influence each other over time. Scholars have highlighted that limited work has focused on coparenting between unmarried adolescent mothers and fathers (Pittman & Cooley, 2011), and our results support the notion that the mother-father subsystem is valuable to examine.

Limitations and Future Directions

The current study makes several contributions to the coparenting literature; however, there are various limitations that should be mentioned, and these provide directions for future work. First, although systems theory suggests that a family system includes many subsystems (Cox & Paley, 1997; Minuchin, 1985), the current study only assessed mothers' reports of coparenting among the mother-father and mother-grandmother subsystems. Given that findings indicated that subsystems informed each other, it will be important for future work to build on this study by examining influences between additional subsystems (e.g., the mother-grandfather subsystem, the father-grandmother subsystem), assessing additional

family members' reports of coparenting, and moving beyond dyadic subsystems to also examine triadic-level processes. For example, previous research with Latino families has indicated that the relationship that a parenting adolescent mother has with her own sibling is impacted after an adolescent pregnancy occurs in a family (East & Chien, 2013). In addition, within the coparenting literature, we know little about subsystems that involve grandfathers. An increasing number of households in the U.S. across ethnic-racial backgrounds are multigenerational, which includes parents, grandparents, and grandchildren (Cohn & Passel, 2016). Among Latino families specifically, the number of multigenerational households increased from 23% to 25% from 2009 to 2014, and is continuing to increase (Cohn & Passel, 2016). Therefore, it is likely that grandfathers impact the functioning and adaptive abilities of families, and it will be important to include grandfathers in future work to more comprehensively understand the nature of coparenting relationships within adolescent mother families.

In addition, although the current study was the first to examine coparenting relationships among multiple subsystems over five waves, we did not begin assessing coparenting until children were 10 months of age. The benefit of measuring these parenting processes when children were 10 months of age was that we were able to capture parenting at time when infant temperament is thought to become more consolidated and stable, when infants typically begin to show more intentional communication strategies, and when children begin to make several important early cognitive and motor advances. We recognize that, despite some of the benefits of waiting until a 10-month measurement, we may have missed earlier development of the mother-grandmother and mother-father coparenting relationship, and future work should examine how these multiple coparenting relationships develop during pregnancy and throughout the child's first year.

Further, the assessment of coparenting in the present study only included the frequency of coparenting conflict and communication. Feinberg (2003) noted that coparenting consists of multiple components that are related but distinct. Thus, future work would benefit from examining other features, such as coparenting support, over time. Furthermore, the current study assessed coparenting communication in terms of the *frequency* with which communication occurred among coparents; assessing aspects of coparenting that are indicative of a positive relationship (e.g., coparenting support), and examining their association with maladaptive coparenting components (e.g., coparenting undermining) will be informative. A deeper understanding of the dynamic ways that coparenting components are associated with each other over time across various coparenting subsystems will provide further information regarding the aspects of coparenting that would be the most beneficial to target for interventions.

On a related note, the measure of coparenting that we used was not validated with Mexican-origin adolescent mothers prior to the current study. Although the measure has been validated among divorced and separated mothers and fathers, coparenting within Mexican-origin adolescent parenting families may be different. For example, as noted, cultural values (e.g., familismo; Knight et al., 2010) may have influenced coparenting processes in the present study; therefore, it will be important for future research to continue to examine the

psychometric properties of these coparenting measures with Mexican-origin adolescent mothers and their families.

Finally, the fit of the final model in the present study was only marginally acceptable (i.e., the RMSEA was acceptable, but the CFI was only marginally acceptable). It is likely that model fit was marginal because of the large number of paths that were estimated relative to the sample size. It will be important for future studies to examine coparenting relationships in adolescent mother families over time with larger samples. Also, because of our relatively modest sample size, we were unable to test whether there were differences in paths based on coresidency of the coparenting subsystem. Indeed, prior work indicated that coresidency moderated the relation between grandmothers' support and partners' support and mothers' parenting (Contreras, 2004). Although we controlled for mother-grandmother and mother-father coresidency at each wave, an important future research direction with larger samples will be to test whether the ways in which the frequency of coparenting communication and conflict are associated with one another over time is moderated by subsystems' coresidency.

Conclusion

Despite the limitations of the current study, the findings contribute significantly to the coparenting literature in several ways. First, scholars have noted that coparenting research that includes multiple coparents and follows the family over time is strongly needed (Jones & Lindahl, 2011), and the current study is a first step toward addressing this recommendation by examining mother-father and mother-grandmother coparenting during the period of infancy and early childhood. In addition, by focusing on two aspects of coparenting, it was possible to examine whether conflict predicted changes in communication, whether communication predicted changes in conflict, or both. Finally, the cross-lagged design of the current study enabled an examination of how coparenting within one subsystem was related to coparenting within another subsystem over time, which previously had not been studied but is necessary in an effort to understand the long-term nature of these complex and bidirectional family dynamics. Given that coparenting dynamics in the mother-father subsystem predicted coparenting within the mother-grandmother subsystem, findings underscore that a particularly important subsystem to examine involves adolescent mothers and the fathers of their children because their relationship has implications for other subsystems within families. In conclusion, by examining coparenting communication and conflict across time, the current study highlights various aspects of family dynamics that can be targeted for interventions that aim to foster positive coparenting relationships and improve outcomes for families with an adolescent pregnancy.

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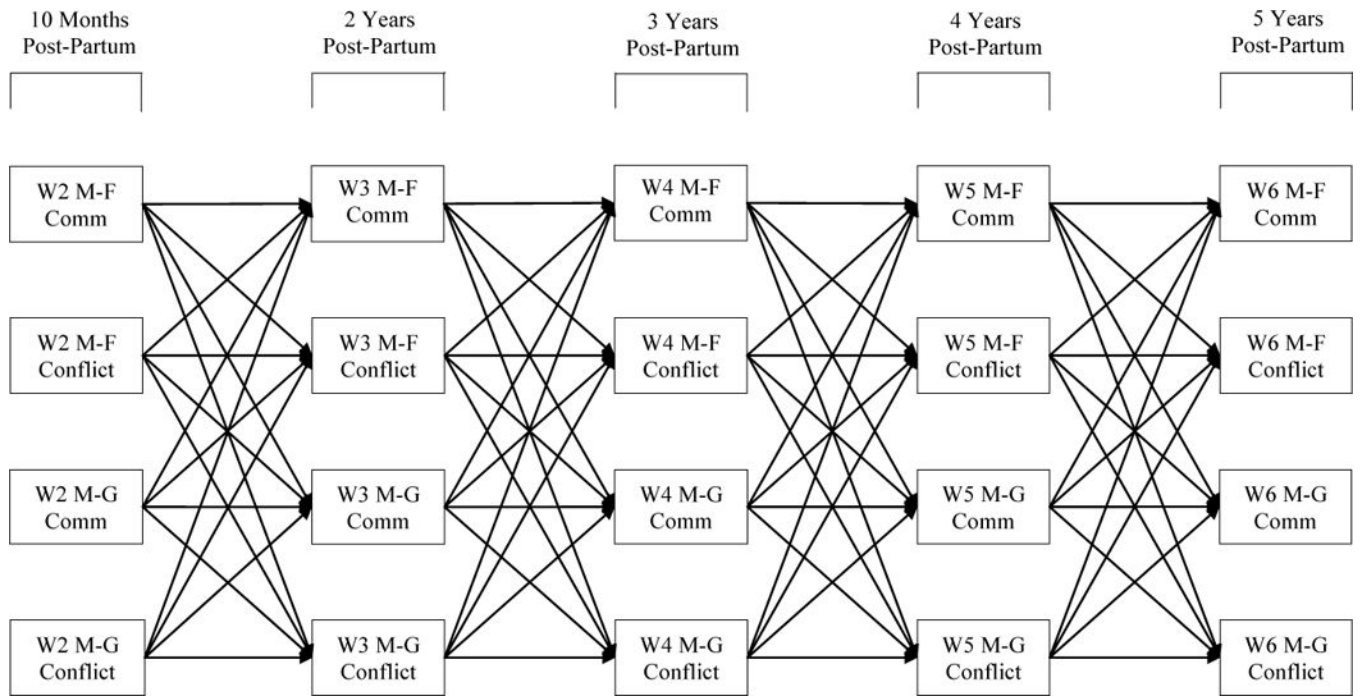


Figure 1. Conceptual model. W = Wave, Comm = Communication, M-F = Mother-Father, and M-G = Mother-Grandmother.

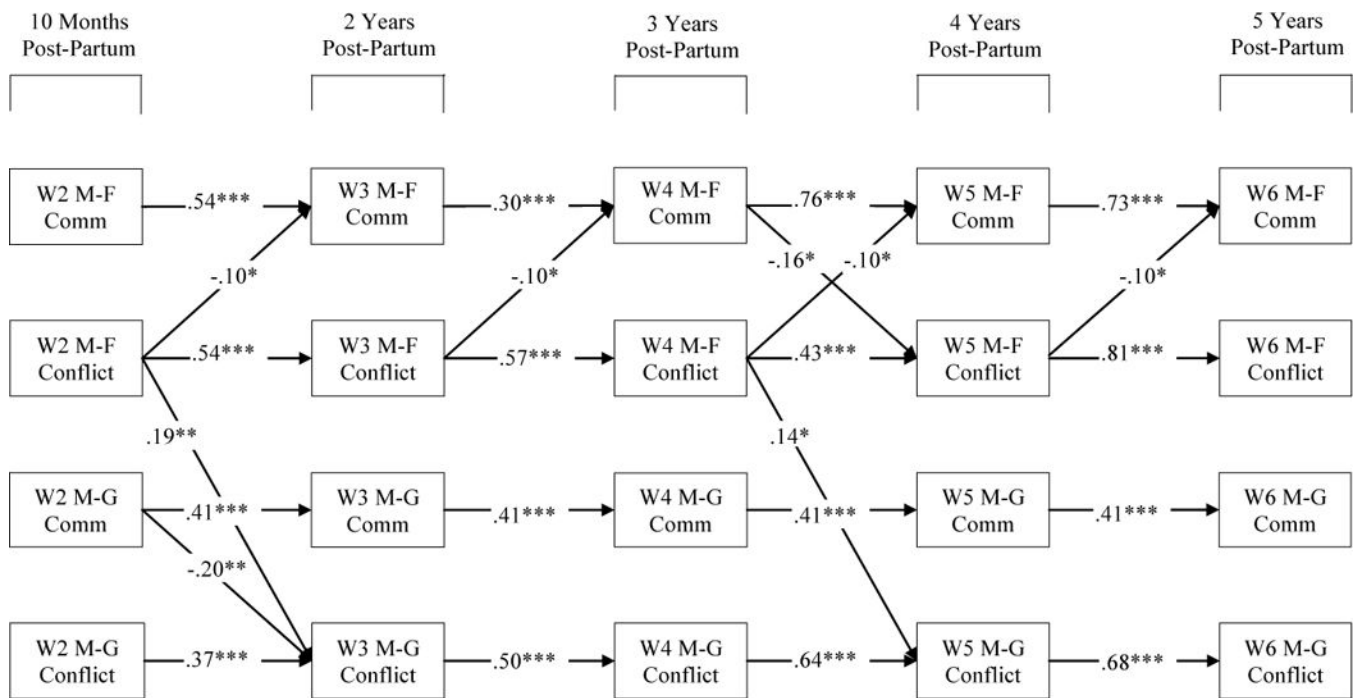


Figure 2. Final partially constrained model. W = Wave, Comm = Communication, M-F = Mother-Father, and M-G = Mother-Grandmother. The following covariates were specified in the model but are not diagrammed for ease of illustration: mother-father coresidency, and mother-grandmother coresidency at each wave predicting all coparenting variables at the following wave, and mothers' age and nativity predicting all W2 coparenting variables. In addition, covariances between all coparenting variables and covariates at concurrent waves were estimated but not diagrammed here. All path estimates are unstandardized, and only significant associations are diagrammed. * p .05. ** p .01. *** p .001

Table 1

Means, Standard Deviations, and Correlations Among Wave 1, Wave 2, and Wave 3 Controls and Coparenting Variables (N = 178).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
1. W1 M Age	–														
2. W1 M Nativity	.10	–													
3. W1 F Nativity	.07	.32***	–												
4. W1 G Nativity	.11	.46***	.41***	–											
5. W2 MF Co Comm	.13	.03	.07	.01	–										
6. W2 MF Co Conflict	-.07	.16*	.07	.13	-.34***	–									
7. W2 MG Co Comm	-.00	.08	.14	.11	.05	.14	–								
8. W2 MG Co Conflict	-.07	.09	.00	-.04	-.10	.36***	-.08	–							
9. W2 MF Coresidency	-.25***	.06	.06	-.06	-.38***	.20**	.13	.13	–						
10. W2 MG Coresidency	.04	.03	-.10	.10	.16*	-.04	-.23**	.00	-.41***	–					
11. W3 MF Co Comm	.01	.02	.07	.02	.65***	-.22**	.01	-.02	-.34***	.22**	–				
12. W3 MF Co Conflict	.02	.12	.15*	.26***	-.07	.47***	.05	.10	.08	-.08	-.19*	–			
13. W3 MG Co Comm	-.07	-.05	.03	.03	.01	.09	.43***	-.04	.12	-.22**	.08	.12	–		
14. W3 MG Co Conflict	-.03	.07	-.01	-.09	-.16*	.32***	-.22**	.44***	.03	.16*	-.07	.10	-.20**	–	
15. W3 MF Coresidency	-.20**	-.01	-.03	-.08	-.37***	-.03	.04	-.05	.50***	-.29***	-.47***	.15*	.00	.07	
16. W3 MG Coresidency	.13	.05	.01	.12	.17*	-.04	-.19*	.09	-.22**	.40***	.10	-.11	-.18*	-.06	
–														-.37***	
Mean	16.78	.66	.48	.32	3.54	2.64	3.88	2.00	1.67	1.25	3.43	2.57	3.78	2.16	1.65
Standard Deviation	1.00	.47	.50	.46	1.42	1.02	.90	.85	.47	.44	1.48	1.06	1.01	.83	.48

Note. W1 = Wave 1, W2 = Wave 2, W3 = Wave 3, M = Mother, F = Father, G = Grandmother, Co = Coparenting, Comm = Communication.

* p .05.

** p .01.

*** p .001. Coresidency coded as 0 = Do Not Live Together, 1 = Live Together. Nativity coded as 0 = Born outside the U.S., 1 = Born in the U.S.

Table 2

Means, Standard Deviations, and Correlations Among Wave 4, Wave 5, and Wave 6 Controls and Coparenting Variables (N = 178).

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. W4 MF Co Comm	–															
2. W4 MF Co Conflict	-.32***	–														
3. W4 MG Co Comm	.18*	-.06	–													
4. W4 MG Co Conflict	.02	.34***	-.05	–												
5. W4 MF Coresidency	-.37***	.36***	.15*	.21**	–											
6. W4 MG Coresidency	.03	-.16*	-.23**	-.30***	-.32***	–										
7. W5 MF Co Comm	.79***	-.28***	.05	-.03	-.45***	.11	–									
8. W5 MF Co Conflict	-.36***	.54***	.05	.24**	.31	-.20**	-.33***	–								
9. W5 MG Co Comm	.20**	-.13	.48***	-.11	-.02	-.06	.28***	.07	–							
10. W5 MG Co Conflict	-.01	.38***	-.13	.70***	.14	-.17*	-.06	.25***	-.19*	–						
11. W5 MF Coresidency	-.40***	.25***	-.05	.22**	.62***	-.22**	-.48***	.32***	-.10	.23**	–					
12. W5 MG Coresidency	.07	.03	-.06	-.18*	-.03	.27***	.02	-.00	-.11	-.16*	-.23**	–				
13. W6 MF Co Comm	.69***	-.27***	.19*	-.10	-.36***	-.02	.76***	-.45***	.15*	-.17*	-.44***	.08	–			
14. W6 MF Co Conflict	-.20**	.51***	.00	.37***	.18*	-.17*	-.10	.67***	.08	.40***	.23**	-.06	-.30***	–		
15. W6 MG Co Comm	.16*	.01	.45***	.07	.21**	-.18*	.11	-.02	.42***	-.05	.02	-.08	.17*	.09	–	
16. W6 MG Co Conflict	.06	.29***	-.03	.64***	.02	-.21**	.01	.20**	-.09	.76***	.19*	-.20**	-.04	.38***	.02	–
Mean	3.81	2.61	3.84	2.23	1.66	1.46	3.67	2.68	3.78	2.14	1.70	1.51	3.61	2.78	3.76	2.01
Standard Deviation	1.14	1.06	.90	.84	.47	.50	1.30	.95	.96	.86	.46	.50	1.33	1.16	.89	.77

Note. W4 = Wave 4, W5 = Wave 5, W6 = Wave 6, M = Mother, F = Father, G = Grandmother, Co = Coparenting, Comm = Communication.

* p .05.

** p .01.

*** p .001. Coresidency coded as 0 = Do Not Live Together, 1 = Live Together.

Table 3

Nested Model Comparisons, Fit Statistics, and Chi-Square Difference Test for Equality Constraints Imposed Across Waves (W2 to W3, W3 to W4, W4 to W5, and W5 to W6)

Model	Models Compared	Constraints	CFI	RMSEA	$\chi^2(df)$	$\chi^2(df)$	p	Constraint Kept
0		Unconstrained	0.88	0.06	482.01 (298)			
Autoregressive Paths								
1	0 and 1	MFcomm → MFcomm	0.86	0.06	508.50 (301)	26.49 (3)	0.00	No
2	0 and 2	MFcon → MFcon	0.87	0.06	490.27 (301)	8.26 (3)	0.04	No
3	0 and 3	MGcomm → MGcomm	0.88	0.06	483.70 (301)	1.69 (3)	0.64	Yes
4	3 and 4	MGcon → MGcon	0.87	0.06	497.40 (304)	13.70 (3)	0.00	No
Within-Dyad Paths								
5	3 and 5	MFcon → MFcomm	0.88	0.06	488.92 (304)	5.22 (3)	0.16	Yes
6	5 and 6	MFcomm → MFcon	0.87	0.06	501.31 (307)	12.39 (3)	0.01	No
7	5 and 7	MGcomm → MGcon	0.87	0.06	498.45 (307)	9.53 (3)	0.02	No
8	5 and 8	MGcon → MGcomm	0.88	0.06	491.16 (307)	2.25 (3)	0.52	Yes
Between-Dyad Cross-Lagged Paths (M-F Predicting M-F)								
9	8 and 9	MGcomm → MFcomm	0.88	0.06	494.92 (310)	3.75 (3)	0.29	Yes
10	9 and 10	MGcon → MFcomm	0.88	0.06	498.73 (313)	3.81 (3)	0.28	Yes
11	10 and 11	MGcomm → MFcon	0.87	0.06	504.35 (316)	5.62 (3)	0.13	Yes
12	11 and 12	MGcon → MFcon	0.87	0.06	511.36 (319)	7.01 (3)	0.07	Yes
Between-Dyad Cross-Lagged Paths (M-F Predicting M-G)								
13	12 and 13	MFcomm → MGcomm	0.87	0.06	512.91 (322)	1.54 (3)	0.67	Yes
14	13 and 14	MFcon → MGcomm	0.87	0.06	513.92 (325)	1.01 (3)	0.80	Yes
15	14 and 15	MFcomm → MGcon	0.87	0.06	520.06 (328)	6.14 (3)	0.10	Yes
16	15 and 16	MFcon → MGcon	0.87	0.06	529.34 (331)	9.28 (3)	0.03	No
Coresidency Controls Predicting M-F Paths								
17	15 and 17	MFcores → MFcomm	0.87	0.06	520.91 (331)	0.85 (3)	0.84	Yes
18	17 and 18	MGcores → MFcomm	0.88	0.06	520.99 (334)	0.08 (3)	0.99	Yes
19	18 and 19	MFcores → MFcon	0.88	0.06	521.40 (337)	0.41 (3)	0.94	Yes
20	19 and 20	MGcores → MFcon	0.88	0.06	521.96 (340)	0.56 (3)	0.91	Yes
Coresidency Controls Predicting M-G Paths								

Model	Models Compared	Constraints	CFI	RMSEA	$\chi^2(df)$	$\chi^2(df)$	<i>p</i>	Constraint Kept
21	20 and 21	MFcores → MGcomm	0.88	0.05	523.64(343)	1.68(3)	0.64	Yes
22	21 and 22	MGcores → MGcomm	0.88	0.05	527.24(346)	3.60(3)	0.31	Yes
23	22 and 23	MFcores → MGcon	0.88	0.05	529.17(349)	1.94(3)	0.58	Yes
24	23 and 24	MGcores → MGcon	0.88	0.05	535.11(352)	5.93(3)	0.12	Yes

Note. MF = Mother-Father, MG = Mother-Grandmother, Comm = Communication, Con = Conflict, Cores = Coresidency. The covariances between all coparenting variables and covariates at concurrent waves were tested but not included here.