Trajectories of Mothers' Discipline Strategies and Interparental Conflict: Interrelated Change during Middle Childhood

Jennifer E. Lansford,
Center for Child and Family Policy, Duke University

Angela D. Staples,
Department of Psychology, University of Virginia

John E. Bates,
Department of Psychological and Brain Sciences, Indiana University

Gregory S. Pettit, and
Department of Human Development and Family Studies, Auburn University

Kenneth A. Dodge
Center for Child and Family Policy, Duke University

Abstract

Using data collected annually when children were in kindergarten through 3rd grade ($N = 478$), this study investigated changes in mothers' use of nonharsh, harsh verbal, and physical discipline; changes in interparental conflict; and associations between changes in discipline and interparental conflict. Controlling for potential confounds, physical discipline decreased over the course of middle childhood, whereas harsh verbal and nonharsh discipline remained stable. Increases in interparental conflict were associated with increases in physical discipline; decreases in interparental conflict were associated with decreases in physical discipline. Change in interparental conflict was unrelated to change in harsh verbal or nonharsh discipline, although more frequent interparental conflict was associated with more frequen10t use of all three types of discipline in 1st grade. Findings extend previous research on how two major forms of communication within families—conflict between parents and parents' attempts to influence their children through discipline—change across middle childhood.

One of the key premises of family systems theory is that experiences in one domain of family functioning affect other domains of family functioning. Of particular interest has been how parents' experiences in their marital relationship affect their ability to function well as parents. The focus of the present study is on how changes in one key aspect of marital relationships (interparental conflict) are related to changes in one specific aspect of parent-child relationships (mothers' discipline strategies).

Davies, Sturge-Apple, and Cummings (2004) provide an insightful review of several theoretical perspectives that could account for associations between interparental conflict and parenting practices. For example, the spillover hypothesis posits that negative affect experienced in conflictual interparental relationships spills over into the parent-child domain and increases the likelihood that parents will behave in harsh and inconsistent ways with their children (e.g., Floyd, Gilliom, & Costigan, 1998). To illustrate, using observations and daily emotion checklists, Almeida, Wethington, and Chandler (1999) found that mothers

Correspondence should be addressed to Jennifer E. Lansford, Center for Child and Family Policy, Duke University, Box 90545, Durham, NC 27708. Phone and fax: 217-586-2870. lansford@duke.edu.

were 41% more likely and fathers were 60% more likely to engage in a difficult disciplinary exchange with their child if they had experienced marital tension on the previous day.

Alternately, the compensatory hypothesis suggests that parents may try to make up for intimacy needs that are not being fulfilled in interparental relationships by being especially attentive in parent-child relationships or may try to protect children from the risks associated with witnessing interparental conflict by increasing harmony in the parent-child relationship (e.g., Belsky, Youngblade, Rovine, & Volling, 1991). Different specific hypotheses can be subsumed by the broader principle of interdependency, which states that functioning in any given relationship in a family system is dependent, at least in part, on functioning in other relationships within the family system (Cox, Paley, & Harter, 2001; O'Connor, Hetherington, & Clingempeel, 1997).

Although understanding links between interparental conflict and parents' use of different discipline strategies is of considerable interest, the majority of studies that have examined these associations have used cross-sectional designs. The present study is the first to model change over time in both interparental conflict and mothers' use of different forms of discipline over the course of several years, making it possible to examine longitudinal relations between these two family subsystems.

Change Over Time in Parents' Discipline Strategies

Socha (2006) points out that communication scholars are relative newcomers to the study of parents' discipline of children but that a communication framework holds much potential for bringing a fresh perspective to understanding parents' discipline strategies. To accomplish the overarching goal of socializing children to be well-functioning members of their respective societies, parents use communication in many ways, including to provide information, offer comfort, and mold children's behavior (Socha, 2006). Discipline represents one of the primary mechanisms through which parents try to influence or persuade their children (Wilson & Morgan, 2004).

In an observational study of mothers and children, Oldershaw, Walters, and Hall (1989) found that mothers in a nonclinical sample made an average of 75 requests of their children per hour, and children did not comply with 35% of these requests. Mothers handled this noncompliance through a number of different discipline strategies such as providing explanations, expressing disapproval, and offering rewards for compliance, which were aimed at punishing misbehavior and promoting desired behavior in the future.

Scholars who study parents' discipline strategies have made conceptual and empirical distinctions among different forms of discipline. The specific distinctions have varied across studies, but physical discipline has been singled out most frequently for investigation (see Gershoff, 2002, for a review). Parents' use of physical discipline peaks when children are two years old and decreases in frequency thereafter (Straus & Stewart, 1999). As children grow older, parents are less likely to believe that using physical discipline is appropriate and more likely to be able to manage their children's misbehavior using nonphysical forms of discipline (Collins, Madsen, & Susman-Stillman, 2002).

Harsh discipline can take verbal as well as physical forms and might include yelling, threatening, and shaming. Harsh verbal discipline has been studied much less frequently than has physical discipline, and almost no research has examined longitudinal change over time in parents' use of harsh verbal discipline. Cross-sectional data have shown links between harsh verbal discipline and corporal punishment (Roberto, Carlyle, & Goodall, 2007; Roberto, Carlyle, & McClure, 2006).

Not all discipline takes harsh forms. Indeed, one goal of many parenting interventions is to teach parents to discipline children in nonharsh ways (e.g., Stolk et al., 2008; Zhou, Sandler, Millsap, Wolchik, & Dawson-McClure, 2008). One of the key nonharsh forms of discipline described in the literature is inductive reasoning, which involves parents' explanations regarding misbehavior and attempts to help children understand from others' perspective why they should or should not behave in a certain way (Grusec & Goodnow, 1994; Hoffman, 1983; Horton, Ray, & Cohen, 2001). In contrast to physical discipline, which is an after-the-fact attempt to punish misbehavior that has occurred already, inductive reasoning has more potential to be used proac-tively to try to prevent misbehavior before it occurs. In addition to inductive reasoning, parents may also use other nonharsh forms of discipline, including removing privileges (e.g., time out or sending the child to his or her room).

Less research has focused on these forms of discipline than on physical discipline, but there is some evidence that parents' use of inductive reasoning increases with child age, perhaps in response to children's growing cognitive capacity to understand more complex reasoning and perspective-taking (Collins et al., 2002). In naturalistic observations of mother-child interactions, Wilson, Cameron, and Whipple (1997) found that mothers often use a mixture of inductive and power assertive communication strategies when trying to manage children's behavior during the course of interactional exchanges. One question that has not been addressed in the extant literature is whether, over the course of long-term development, changes over time in parents' use of one type of discipline are accompanied by changes in the use of other types of discipline.

Change Over Time in Interparental Conflict

Conflict is one of the most widely studied aspects of family communication (Sillars, Canary, & Tafoya, 2004). Conflict is often the result of a breakdown in communication. From a family systems perspective, it is important to consider relationships at different levels within family systems. Parents' use of discipline captures one aspect of parent-child relationships that often involves some degree of conflict (e.g., the child disobeys the parent, which leads the parent to try to correct the child's misbehavior). At a different level of the family system, interparental conflict captures discord between adults in the family.

As with parents' use of different discipline strategies, which can be conceptualized from a developmental framework in which change over time would be expected, some studies have found interparental conflict to change over time. The developmentally predictable change appears to occur as interparental conflict increases after the transition to parenthood (Belsky & Pensky, 1988; Belsky & Rovine, 1990). Studies of later developmental periods generally have found stability in interparental conflict over time (Acock & Demo, 1999; Gerard, Krishnakumar, & Buehler, 2006). For the purposes of the present study, potential change over time in interparental conflict was of particular importance in examining whether change in interparental conflict was associated with change in disciplinary strategies.

Links between Interparental Conflict and Parents' Discipline Strategies

Wilson and Morgan (2004) conclude from their review of persuasion attempts in families that there are a number of communicative similarities between interparental conflict and parents' discipline strategies. For example, failed persuasion attempts in families might result in conflict in relationships between parents and in discipline in parent-child relationships (Wilson & Morgan, 2004). There is evidence that high levels of interparental conflict are related to less responsive and harsher parenting. Erel and Burman's (1995) meta-analysis of 68 studies showed moderate levels of association between interparental and parent-child relationship quality.

Likewise, Krishnakumar and Buehler's (2000) meta-analysis of 138 effect sizes from 39 studies showed moderate effects that supported the spillover of interparental conflict into parent-child relationships. Harsh discipline and parental acceptance were the two parenting behaviors most highly related to interparental conflict (Krishnakumar & Buehler, 2000). However, prospective longitudinal tests of these relations have been rare. In an exception, Davies et al. (2004) found in a sample of 227 kindergarten students that high initial levels of interparental discord predicted a decrease in maternal acceptance of children one year later. Shelton and Harold (2008) found that interparental conflict was related to children's perceptions 12 months later of being rejected by their fathers and mothers. The present study makes a novel contribution to the literature by examining longitudinal relations between interparental conflict and parents' use of different types of discipline strategies over the course of three years during middle childhood.

The Present Study

Using longitudinal data collected when children were in kindergarten through 3rd grades, the present study addresses three research questions. First, in what ways do mothers' discipline strategies change over the course of middle childhood? We hypothesized that mothers' use of physical discipline would decrease and their use of nonharsh discipline would increase over this period. Although previous longitudinal research on harsh verbal discipline was too scarce to form a directional hypothesis, we examined change over time in harsh verbal discipline, too. Second, does interparental conflict change over the course of middle childhood? We did not hypothesize particular patterns of change but sought to examine the possibility. Third, how are changes in interparental conflict related to changes in mothers' discipline strategies over the course of middle childhood? We hypothesized that increases in interparental conflict would be associated with increases in harsh verbal discipline, increases in physical discipline, and decreases in nonharsh discipline.

In examining these questions, we controlled for several potential confounds. First, we controlled for race and SES, as these demographic variables have been found in previous research to relate to parents' discipline strategies (e.g., Bradley, Corwyn, Burchinal, McAdoo, & García Coll, 2001). Second, we controlled for children's externalizing behavior in kindergarten because more difficult children elicit more discipline from their parents (e.g., Larzelere, 2000) and may contribute to interparental conflict (Clingempeel & Brand-Clingempeel, 2004). Third, we controlled for whether the parents experienced a divorce or separation during the study period, as families undergoing these changes might differ from other families on both interparental conflict and parents' discipline (Amato, Loomis, & Booth, 1995; Hetherington & Clingempeel, 1992).

Method

Participants

Participating families were drawn from the Child Development Project, a multisite longitudinal study of child development (e.g., Dodge, Bates, & Pettit, 1990). Institutional review boards at the investigators' universities provided oversight of the research process; adult participants provided written informed consent, and child participants provided assent. Families with children entering kindergarten were recruited from two cohorts in 1987 and 1988 from three sites: Knoxville and Nashville, TN and Bloomington, IN. Parents were approached at random during kindergarten pre-registration and asked if they would participate in a longitudinal study of child development. About 15% of children at the targeted schools did not preregister. These participants were recruited on the first day of school or by subsequent contact. Of those asked, approximately 75% agreed to participate.

During the first assessment at age 5, data were collected from 585 families (52% boys; 81% European American, 17% African American, 2% other ethnic backgrounds; 26% single parent headed families; family socioeconomic status (SES) $M = 39.53$, $SD = 14.01$, corresponding to skilled craftsmen, clerical, and sales workers in the Hollingshead, 1979 system). The sub-sample used in this study consisted of 478 families who had any mother-reported discipline or interparental conflict data from grade 1–3. Family structure was not a selection criterion for participation in the larger study, but interparental conflict data were available only for the subset of children who were living with two (not necessarily biological) parents during at least one year from grade 1–3.

Participating families ($n = 478$) were compared with nonparticipating families ($n = 107$) on age 5 demographic variables (child sex, child ethnicity, maternal education, family SES). Out of the four tests performed, significant differences were found only for child race and maternal education. Participating families were more likely to be European American, $t(583) = 2.77$, $p < .01$ (92% EA in the participating families vs. 77% EA in the nonparticipating families) and to include mothers who received more education, $t(568) = -3.09$, $p < .05$ (4.74 in the participating families vs. 4.36 in the nonparticipating families).

Procedure and Measures

Data for the present study were collected in annual home interviews with mothers when their children were in grades 1 through 3.

Discipline

The discipline data were based on responses to the question "During the last year what kinds of things have you done to correct your child's behavior?" Mothers indicated the frequency with which they used 13 discipline strategies on a 5-point scale ranging from 0 = *never* to 4 = *about every day*. These items were adapted from similar measures of discipline (e.g., Straus, 1979) and have demonstrated construct validity in their expected relations with both predictors and outcomes hypothesized to be associated with different forms of discipline (e.g., Gershoff et al., 2010; Lansford et al., 2005; Lansford, Criss, Dodge, Shaw, Pettit, & Bates, 2009; Lansford, Wager, Bates, Dodge, & Pettit, 2012).

The 13 items were divided into three categories: nonharsh discipline, harsh verbal discipline, and physical discipline. Nonharsh discipline was the mean response to seven items (e.g., sent to room, talk and explain reasons, tell child how to behave or how not to behave, get child to apologize), with a mean alpha of 0.79 (range 0.75 to 0.83). Harsh verbal discipline was the mean response to three items (yell, threaten punishment, shame or embarrass), with a mean alpha of 0.61 (range 0.57 to 0.64). Physical discipline was the mean response to three items (grab or shake, spank with hand, spank with object), with a mean alpha of 0.56 (range 0.50 to 0.61).

Interparental conflict

Using a 5-point scale ranging from 0 = *never* to 4 = *about every day*, mothers indicated how often in the last year their child witnessed mild arguments (no shouting), big arguments (shouting), shouting and pushing, and physical fights between the mother and her spouse or cohabiting partner. The interparental conflict variables asked about conflict between residential parents (either between biological parents or between the biological mother and stepfather). A composite interparental conflict score was created by averaging the responses to the four items regarding the disagreements witnessed by the child in the last year (range = 0.63 to 0.72).

These measures about conflict witnessed by the child were not available when the child was in kindergarten, but at that time (and not in grades 1–3 needed for the trajectory analyses), mothers completed the Conflict Tactics Scale (Straus, 1979) to assess conflict between the mother and her spouse or partner, regardless of whether the child witnessed the conflict. This kindergarten measure of conflict was significantly correlated with the grade 1 measure of conflict witnessed by the child, $r(363) = .45$, $p < .001$, suggesting the validity of the conflict measure used in the present study in relation to the widely used Conflict Tactics Scale. Although only mothers' reports of interparental conflict were available in grades 1–3, previous research has documented moderate concordance between mothers' and fathers' reports of their conflict with one another (Vega & O'Leary, 2007).

Child Externalizing Behavior

During the summer before children started kindergarten, fathers completed the Child Behavior Checklist (Achenbach, 1991; Achenbach & Edelbrock, 1983), which includes items such as "gets in many fights" and "disobedient at school." For each of 33 items in the externalizing behavior subscale, fathers rated whether the statement was not true for the child (0), somewhat or sometimes true (1), or very true or often true (2). During the spring of the kindergarten school year, children's teachers completed the Teacher Report Form (Achenbach, 1991; Achenbach & Edelbrock, 1986), with items comparable to those asked of the fathers. For each of 34 items in the externalizing behavior subscale, teachers rated whether the statement was not true for the child (0), somewhat or sometimes true (1), or very true or often true (2). The average of fathers' and teachers' reports of children's externalizing behavior at age 5 was used as a control variable in analyses.

Results

Descriptive Statistics

Descriptive statistics for the study variables are presented in Table 1. Correlations between interparental conflict and the frequency with which mothers used each of the three types of discipline are reported in Table 2. In general, the relations were positive and modest, suggesting that families with more frequent interparental conflict use more frequent nonharsh discipline, harsh verbal discipline, and physical discipline. Correlations among the interparental conflict variables across years averaged 0.29. Corresponding average cross-year correlations for nonharsh discipline, harsh verbal discipline, and physical discipline averaged 0.63, 0.58, and 0.60, respectively. These correlations suggest moderate stability in interparental conflict and each form of discipline over time from grade 1 to 3.

There were no group differences between participants with missing data and participants with complete data in terms of race, interparental conflict, and average use of discipline. However, participants without missing data tended to have higher SES and were more likely to be married or cohabitating when their children were in kindergarten. Analysis of missing data patterns using SPSS Missing Value Analysis provided evidence that data were consistent with the assumption of missing at random. Thus, we chose full information maximum likelihood to estimate parameters with missing data. The percentage of participants with missing data ranged from 3% to 18% for grades 1 through 3. For the latent growth curve models of a single variable, we examined the role of race, SES, child externalizing problems at age 5, and divorce/separation in predicting the intercept and slope parameters because these variables have been related to parents' discipline practices in previous research (e.g., Bradley et al., 2001).

In preliminary analyses, we used a 3-group coding of race (European American, African American, and other), but the findings did not differ from a 2-group coding (European

American compared to African American and other); therefore the findings below use the 2-group coding. Over the entire study period, 75 mothers reported experiencing a divorce or separation. The number of mothers reporting a divorce or separation in any individual year was too small to test for a time-dependent link between divorce/separation and interparental conflict or discipline practices. Instead, we included a variable to index whether a divorce or separation occurred during 1st through 3rd grades.

Growth Models

We conducted growth model and cross-domain growth model analyses within a structural equation modeling approach using AMOS software (Arbuckle, 2006). Models were fit with maximum likelihood estimation and robust standard errors, and data were log or square root transformed prior to analyses to adjust for nonnormality. Based on visual inspection of graphs of the variables over time, it was determined that modeling linear change would be appropriate for all of the variables. Preliminary analyses tested for child gender differences in all models; no gender differences were found.

Prior to examining the cross-domain growth between interparental conflict and discipline, we conducted four latent growth curve (LGC) models: one for interparental conflict and one for each of the three types of discipline. The final model estimates are listed in Table 3. These models provided an estimate of the average behavior at grade 1 and the average rate of change from grade 1 to 3. LGC models for interparental conflict and physical discipline fit the data well (interparental conflict: $x^2 = 3.38$, $df = 7$, $p = 0.85$, CFI = 1.00, RMSEA = 0.00; physical discipline: $x^2 = 1.30$, $df = 7$, $p = 0.99$, CFI = 1.00, RMSEA = 0.00).

However, the LGC models for nonharsh and harsh verbal discipline did not adequately fit the data (nonharsh discipline: $x^2 = 19.55$, $df = 7$, $p = 0.01$, CFI = 0.98, RMSEA = 0.06; harsh verbal discipline: $x^2 = 28.68$, $df = 7$, $p = 0.00$, CFI = 0.96, RMSEA = 0.08). Inspection of the parameter estimates for both nonharsh and harsh verbal discipline indicated there was no statistically significant change in these discipline strategies from 1st through 3rd grades nor was the variance of the slope estimate statistically different from zero, which suggests the stability of these variables was reasonably homogenous in the sample.

Examination of the LGC parameter estimates in Table 3 shows that children infrequently witnessed interparental conflict and that this declined somewhat from grade 1 to 3. Interparental conflict was higher in 1st grade for families who experienced divorce during the time of the study. In terms of change from 1st to 3rd grade, higher levels of interparental conflict in 1st grade were associated with faster declines while higher levels of child externalizing behavior at age 5 were associated with slower declines in interparental conflict. Of the three types of discipline, nonharsh discipline was used most frequently followed by harsh verbal and finally physical discipline.

There was a significant effect of race on the intercept for nonharsh discipline and harsh verbal discipline, indicating that both of these types of discipline were used more frequently in European American than in African American families. There was no effect of race on physical discipline, but families of lower SES used physical discipline more frequently. Higher ratings of externalizing behavior at age 5 were associated with increased used of all three forms of discipline. Divorce status was associated with more frequent use of harsh verbal discipline in 1st grade. Finally, physical discipline declined whereas the other forms of discipline appeared stable from 1st through 3rd grade.

We next asked if change in interparental conflict was associated with change in physical discipline strategies after accounting for differences due to race, SES, child externalizing behavior, and divorce/separation status. We did not conduct these tests with harsh verbal or

nonharsh discipline because there was no change over time in these constructs to relate to change in interparental conflict. We used a cross-domain growth curve model (Willett & Sayer, 1995) to estimate the relation between interparental conflict and physical discipline over the same period of developmental time after accounting for the direct effects of the covariates (Stoel, van den Wittenboer, & Hox, 2004). Using a direct effects model for the covariates results in an increased number of estimated parameters while leaving the estimates for the intercepts and slopes substantively unchanged.

For example, in the single variable LGC model for interparental conflict, the intercept and slope parameters were regressed on divorce/separation status, resulting in two parameter estimates. In the cross-domain LGC model the direct effects of divorce/separation status are accounted for by regressing interparental conflict at each grade on divorce/separation status, resulting in three parameter estimates. The intercept and slope estimates from the LGC model of interparental conflict in Table 3 and the estimates from Model 1 of the cross-domain LGC models in Table 4 are nearly identical. Thus, the resulting cross-domain LGC models provide estimates of the relation between interparental conflict and physical discipline that are more easily interpretable while still accounting for the effects of the covariates.

A series of nested cross-domain LGC models were fit to the data where the two variables were allowed to covary in Model 1, cross-regression paths were added in Models 2 and 3, and the full model was fit in Model 4 (Table 4). Nested models (Models 2 and 3 vs. Model 1; Model 4 vs. Models 2 and 3) were compared with a log-likelihood ratio test. The first model, which fit the data well, demonstrated a positive association between intercepts of interparental conflict and the use of physical discipline; this model did not test a causal association between interparental conflict and the use of physical discipline but merely allowed the intercepts to covary. Model 2 tested the hypothesis that use of physical discipline leads to changes in interparental conflict by regressing the slope of interparental conflict on the intercept of physical discipline. Model 2 did not improve model fit compared to Model 1.

However, Model 3, which tested the hypothesis that interparental conflict leads to changes in use of physical discipline by regressing the slope of physical discipline on the intercept of interparental conflict, did improve the model fit relative to Model 1. Finally, Model 4 tested the hypothesis that change in interparental conflict leads to changes in the use of physical discipline and that use of physical discipline leads to changes in interparental conflict. Model 4, which included both cross-regression paths, covariance between the intercepts, and covariance between the slopes, did not statistically improve model fit over Model 3. Although Model 3 fit the data better than Models 1 and 4, the pattern and strength of the covariances between the latent variables suggest these two variables were changing so similarly that change in one variable explained the change in the other variable.

More specifically, inclusion of the cross-regression of the slope of interparental conflict on the intercept of physical discipline resulted in a non-significant slope estimate for interparental conflict (Model 2). A similar effect occurred when the slope of physical discipline was regressed on the intercept of interparental conflict (Model 3). Finally, in Model 4, the cross-regression parameter estimates were of similar magnitude, the slope estimates for both variables were nonsignificant, and the covariances between the slope parameters were large and positive. Taken together, this suggests that change in physical discipline co-occurs with change in interparental conflict across 1st through 3rd grade, making it difficult to determine the causal direction of whether changes in interparental conflict lead to changes in use of physical discipline or whether changes in use of physical discipline lead to changes in interparental conflict.

Discussion

The present study contributes to the literature in three important ways. First, we documented patterns of change and stability in three forms of discipline across middle childhood. Second, we found that the expected decrease in physical discipline across middle childhood was not associated with a compensatory increase in harsh verbal discipline or nonharsh discipline. Third, we found that changes in interparental conflict were linked over time with changes in physical discipline, but not with nonharsh discipline or harsh verbal discipline. Previous research has been inconsistent in the application of control variables. In the present study, the longitudinal relations held after controlling for race, SES, prior child externalizing behaviors, and divorce/separation.

Although several studies have documented that physical discipline is used less frequently with older than with younger children (e.g., Straus & Stewart, 1999), little corresponding information is available about parents' use of other forms of discipline. Consistent with previous research (Straus & Stewart, 1999), we also found that the frequency with which mothers used physical discipline decreased over the course of middle childhood. However, mothers' use of nonharsh discipline and harsh verbal discipline remained stable from grade 1 to grade 3. In grade 1, more frequent use of physical discipline was positively correlated with more frequent use of nonharsh discipline and harsh verbal discipline, perhaps because more difficult children elicit more of all types of discipline (Larzelere, Kuhn, & Johnson, 2004).

In addition, there were significant bivariate correlations among the three types of discipline in grades 2 and 3, but because of the stability of nonharsh discipline and harsh verbal discipline over time, change in physical discipline was not correlated with change in the other types of discipline. Previous research has shown that adults regard spanking older children as being less appropriate than spanking younger children (Flynn, 1998). However, we did not find compensatory increases in other forms of discipline as mothers' use of physical discipline decreased.

There are several possible explanations for why changes in rates of interparental conflict predicted changes in rates of physical discipline but not harsh verbal discipline or nonharsh discipline. The types of physical discipline in our measure included forms of mild physical negative touch, which is a critical turning point in terms of escalating discipline situations towards a trajectory that is potentially dangerous to the child (see Reid, 1986; Wilson, Shi, Tirmenstein, Norris, & Rack, 2006). Therefore, physical discipline, more so than harsh verbal discipline or nonharsh discipline, may reflect discipline episodes that have gone awry, such as instances in which a mother perceives that she is unable to keep her child's behavior within reasonable bounds without resorting to spanking. Interparental conflict and negative affect could lead to more of this for several reasons.

For example, when interparental conflict is high, mothers may make less effort to follow their child's lead in situations that do not require the child to behave in a particular way (e.g., free play) and hence elicit more resistance from their child that in turn leads to more episodes of physical discipline. Alternately, negative affect imbued by interparental conflict may lead mothers to interpret a broader range of their children's behaviors as "wrong" and as having been performed intentionally (e.g., Dix, 1991; Dix & Lochman, 1990; Dix, Ruble, & Zambarano, 1989), which in turn may lead to more physical discipline.

A direction for future research will be to examine specific mechanisms that account for the link between interparental conflict and physical discipline. Understanding what accounts for this link has important implications for informing possible interventions. For example, if physical discipline is a marker for larger problems in mother-child interactional dynamics

(Socha, 2006), such as failure to follow the child's lead outside of discipline situations, then the intervention would be to teach mothers to follow their child's lead. If physical discipline results from mothers' misinterpretations of children's behaviors, then the intervention would be to work on cognitive reframing with mothers. Such interventions could also focus on teaching alternatives to physical discipline such as time-out and proactive guidance.

Given that our analyses demonstrated covariation in interparental conflict and physical discipline over time, with possible bidirectional influences, an additional direction for future research will be to understand not only how conflict between parents may spill over into problems in the parent-child relationship but also how problematic parent-child relationships (which are more likely than well-functioning ones to include frequent physical discipline) spill over into conflict between parents.

It is interesting that parents' use of different types of discipline was more stable over time than interparental conflict. Change in interparental conflict may be related to changes in marital status; for example, a decrease in interparental conflict may follow a divorce. Change in interparental conflict may also be related to changes in a family's circumstances over time; for example, conflict regarding legal or financial difficulties might decrease if these difficulties are resolved. Parents' discipline strategies are predicted by both parent and child factors (Lansford et al., 2009), but with the exception of parents using less physical discipline as children get older, it appears that parents establish patterns of nonharsh and harsh verbal discipline early and persist in them over time.

The limitations of the present study suggest directions for future research. First, a single informant (mothers) reported on both discipline and interparental conflict. Although we controlled for fathers' and teachers' reports of children's externalizing behavior, future research that uses multiple informants to assess discipline and interparental conflict and that compares fathers' and mothers' discipline practices crossed with sons versus daughters will be important in reducing concerns about informant effects and in understanding the role of gender in parents' discipline practices. An inherent limitation of self-report data is that they are subject to social desirability biases; in our study mothers may have underreported discipline strategies they perceived as being socially undesirable and overreported discipline strategies they perceived as being socially desirable.

However, alternatives to self-report are potentially even more biased (e.g., discipline encounters may not occur often enough to assess them reliably in observations of parent-child interactions, and parents may be unlikely to discipline children in front of observers). Furthermore, previous research has demonstrated that the majority of American parents report having physically disciplined their child (Straus & Stewart, 1999), and many do not regard this as a bad discipline strategy (Deater-Deckard, Lansford, Dodge, Pettit, & Bates, 2003).

Reliabilities for the measures of both harsh verbal discipline (mean alpha = 0.61) and physical discipline (mean alpha = 0.56) were lower than ideal. This may reflect that both were measured with only three items and that some behaviors may not have occurred or been reported frequently. Because lower reliability tends to attenuate associations between that measure and measures of other constructs, it is possible that some of the null findings (e.g., no changes in harsh verbal discipline over time) could be due in part to measurement error. This concern is tempered given that associations were detected between interparental conflict and physical discipline, but these associations might have been even stronger if the measure of physical discipline had higher reliability.

Another limitation is that the present study examined only the frequency with which children were exposed to interparental conflict and the frequency with which mothers used

different types of discipline strategies. Although we had evidence that mothers' reports of how much interparental conflict children witnessed were moderately correlated with prior mother-reported interparental conflict regardless of whether it was witnessed by the child, it is possible that parents engaged in more frequent conflict than children witnessed, attenuating the links we found between interparental conflict and discipline strategies. In addition, just as discipline is multifaceted, so is interparental conflict.

We considered conflict that ranged from mild arguments to big arguments with shouting to physical fights. Future research would benefit from including other dimensions of interparental conflict and discipline, such as the intensity and duration and whether the conflict was resolved (Buehler, Krishnakumar, Anthony, Tittsworth, & Stone, 1994). Conflict between intimate partners is not necessarily negative, but rather can be a constructive part of resolving disagreements that is more adaptive than conflict avoidance (Gottman, 1994). Likewise, exposure to interparental conflict may not be harmful to children if it gives them the opportunity to witness adults resolving conflict in constructive and nonharmful ways (Grych & Fincham, 1990). An important direction for future research will be to examine further the multifaceted nature of interparental conflict in relation to parenting practices.

It is possible that unaccounted for third variables (e.g., parental impulsivity, poor anger management) are responsible for links between interparental conflict and mothers' discipline strategies. However, the longitudinal design assuages this concern to a certain degree because individuals serve as controls for their own intrapersonal characteristics over time.

A caveat in interpreting the findings from these analyses is that in an effort to make the sample as representative as possible of the diversity of families experiencing interparental conflict, we included all families that had mother-reported interparental conflict data in at least one study year. Because we took this inclusive approach, the sample includes biological mothers who were reporting about conflict with the child's biological father, biological mothers who were reporting about conflict with the child's stepfather, biological mothers who experienced a marital transition during the study period, and biological mothers who were continuously married during the study period. Although we controlled for whether the parents divorced or separated during the study period, the number of parents who divorced or separated in any given year was too small to examine the timing of divorce/separation in relation to increases or decreases in interparental conflict and discipline. A direction for future research will be to elucidate how marital transitions in conjunction with changes in interparental conflict are related to parents' discipline strategies over time.

An additional direction for future research will be to investigate moderators of links between interparental conflict and parents' discipline strategies. For example, parents who are depressed or anxious may be less able to prevent stress associated with interparental conflict from spilling over into their interactions with their children. Indeed, Davies et al. (2004) found that over the course of one year, the link between interparental discord and parenting practices was moderated by parents' depressive symptoms, interparental relationship insecurity, and disagreements about childrearing. Another direction for future research will be to link trajectories of interparental conflict and trajectories of parents' use of different discipline strategies to trajectories of children's adjustment. The quality of interparental and parent-child relationships has been found incrementally to predict children's adjustment (Belsky & Fearon, 2004). One of the leading hypotheses for how interparental conflict affects child adjustment is through the mediating role of poor parenting (El-Sheikh & Elmore-Staton, 2004; Gonzales, Pitts, Hill, & Roosa, 2000).

An additional direction for future research suggested by Socha (2006) is that the concept of "discipline" could be reframed in at least two ways. First, drawing on the concept of orchestrating family interactions in a way that maximizes the potential for positive communication, "discipline" could be reframed in a more positive and proactive way. Second, the study of discipline could move away from the idea of punishing misbehavior or preventing future misbehavior to the more positive promoting of children's full potential.

An implication of these findings for marriage counselors, family therapists, and others working with families in therapeutic settings is that, consistent with a large body of research supporting family systems theory (Almeida et al., 1999; Floyd et al., 1998), problems in the marital system of the family can spill over into the parent-child system. Making parents aware of the link between interparental conflict and the increased likelihood of using physical discipline may help parents consciously work to separate those two family systems. The findings also suggest two entry points for working to enhance family functioning: helping parents in their interactions with one another, helping parents in their interactions with their children, or both.

Taken together, our findings are notable because they add to our understanding of the change and stability in mothers' use of three forms of discipline over the course of middle childhood and because they provide evidence for long-term associations between changes in interparental conflict and changes in physical discipline over time. Although previous research has documented decreases in mothers' use of physical discipline with increasing child age, our study is novel in examining change in nonharsh discipline and harsh verbal discipline in their own right as well as in conjunction with change in mothers' use of physical discipline. Furthermore, despite the conceptual emphasis in family systems theory on interconnections between parents' relationships with one another and parents' relationships with their children, little research has examined these links in the context of a long-term prospective longitudinal study. Our study contributes to the literature by documenting prospective links between interparental conflict and mothers' discipline strategies—two key forms of communication within families—over the course of three years during middle childhood.

Acknowledgments

References

Achenbach, TM. Integrative guide for the 1991 CBCL 14-18, YSR, and TRF Profiles. Burlington, VT: University of Vermont, Department of Psychiatry; 1991.

Achenbach, TM.; Edelbrock, CS. Manual for the child behavior checklist and revised child behavior profile. Burlington, VT: Queen City Printers; 1983.

Achenbach, TM.; Edelbrock, CS. Manual for the teacher's report form and teacher version of the child behavior profile. Burlington, VT: University of Vermont; 1986.

Acock AC, Demo DH. Dimensions of family conflict and their influence on child and adolescent maladjustment. Sociological Inquiry. 1999; 69:641–658.

Almeida DM, Wethington E, Chandler AL. Daily transmission of tensions between marital dyads and parent–child dyads. Journal of Marriage and the Family. 1999; 61:49–61.

Amato PR, Loomis LS, Booth A. Parental divorce, marital conflict, and offspring well-being during early adulthood. Social Forces. 1995; 73:895–915.

Arbuckle, JL. Amos (Version 7.0). Chicago, IL: SPSS; 2006. Computer Program

Belsky J, Fearon RMP. Exploring marriage–parenting typologies and their contextual antecedents and developmental sequelae. Development and Psychopathology. 2004; 16:501–523. [PubMed: 15605623]

Belsky J, Pensky E. Marital change across the transition to parenthood. Marriage and Family Review. 1988; 12:133–156.

Belsky J, Rovine M. Patterns of marital change across the transition to parenthood. Journal of Marriage and the Family. 1990; 52:5–19.

Belsky J, Youngblade L, Rovine M, Volling B. Patterns of marital change and parent–child interaction. Journal of Marriage and the Family. 1991; 53:487–498.

Bradley RH, Corwyn RF, Burchinal M, McAdoo HP, García Coll C. The home environments of children in the United States Part II: Relations with behavioral development through age thirteen. Child Development. 2001; 72:1868–1886. [PubMed: 11768150]

Buehler C, Krishnakumar A, Anthony C, Tittsworth S, Stone G. Hostile interparental conflict and youth maladjustment. Family Relations. 1994; 43:409–416.

Clingempeel, WG.; Brand-Clingempeel, E. Pathogenic-conflict families and children: What we know, what we need to know. In: Coleman, M.; Ganong, LH., editors. Handbook of contemporary families: Considering the past, contemplating the future. Thousand Oaks, CA: Sage; 2004. p. 244-261.

Collins, WA.; Madsen, SD.; Susman-Stillman, A. Parenting during middle childhood. In: Bornstein, MH., editor. Handbook of parenting (2nded), Volume 3: Being and becoming a parent. Mahwah, NJ: Erlbaum; 2002. p. 73-101.

Cox, M.; Paley, B.; Harter, K. Interparental conflict and parent–child relationships. In: Grych, JH.; Fincham, FD., editors. Interparental conflict and child development. New York, NY: Cambridge University Press; 2001. p. 249-272.

Davies PT, Sturge-Apple ML, Cummings EM. Interdependencies among interparental discord and parenting practices: The role of adult vulnerability and relationship perturbations. Development and Psychopathology. 2004; 16:773–797. [PubMed: 15605636]

Deater-Deckard K, Lansford JE, Dodge KA, Pettit GS, Bates JE. The development of attitudes about physical punishment: An 8-year longitudinal study. Journal of Family Psychology. 2003; 17:351–360. [PubMed: 14562459]

Dix T. The affective organization of parenting: Adaptive and maladaptive processes. Psychological Bulletin. 1991; 110:3–25. [PubMed: 1891517]

Dix T, Lochman JE. Social cognition and negative reactions to children: A comparison of mothers of aggressive and nonaggressive boys. Journal of Social and Clinical Psychology. 1990; 9:418–438.

Dix T, Ruble DN, Zambarano RJ. Mothers' implicit theories of discipline: Child effects, parent effects, and the attribution process. Child Development. 1989; 60:1373–1391.

Dodge KA, Bates JE, Pettit GS. Mechanisms in the cycle of violence. Science. 1990; 250:1678–1683. [PubMed: 2270481]

El-Sheikh M, Elmore-Staton L. The link between marital conflict and child adjustment: Parent-child conflict and perceived attachments as mediators, potentiators, and mitigators of risk. Development and Psychopathology. 2004; 16:631–648. [PubMed: 15605629]

Erel O, Burman B. Interrelatedness of marital relations and parent–child relations: A meta-analytic review. Psychological Bulletin. 1995; 118:108–132. [PubMed: 7644602]

Floyd F, Gilliom LA, Costigan CL. Marriage and the parenting alliance: Longitudinal prediction of change in parenting perceptions and behaviors. Child Development. 1998; 69:1461–1479. [PubMed: 9839428]

Flynn CP. To spank or not to spank: The effect of situation and age of child on support for corporal punishment. Journal of Family Violence. 1998; 13:21–37.

Gerard JM, Krishnakumar A, Buehler C. Marital conflict, parent-child relations, and youth maladjustment: A longitudinal investigation of spillover effects. Journal of Family Issues. 2006; 27:951–975.

Gershoff ET. Corporal punishment by parents and associated child behaviors and experiences: A meta-analytic and theoretical review. Psychological Bulletin. 2002; 128:539–579. [PubMed: 12081081]

Gershoff ET, Grogan-Kaylor A, Lansford JE, Chang L, Zelli A, Deater-Deckard K, Dodge KA. Parent discipline practices in an international sample: Associations with child behaviors and moderation by perceived normativeness. Child Development. 2010; 81:487–502. [PubMed: 20438455]

Gonzales NA, Pitts SC, Hill NE, Roosa MW. A mediational model of the impact of interparental conflict on child adjustment in a multiethnic, low-income sample. Journal of Family Psychology. 2000; 14:365–379. [PubMed: 11025930]

Gottman, JM. What predicts divorce? The relationship between marital processes and marital outcomes. Hillsdale, NJ: Erlbaum; 1994.

Grusec JE, Goodnow JJ. Impact of parental discipline methods on the child's internalization of values: A reconceptualization of current points of view. Developmental Psychology. 1994; 30:4–19.

Grych JH, Fincham FD. Marital conflict and children's adjustment: A cognitive-contextual framework. Psychological Bulletin. 1990; 108:267–290. [PubMed: 2236384]

Hetherington EM, Clingempeel WG. Coping with marital transitions: A family systems perspective. Monographs of the Society for Research in Child Development. 1992; 57:2–3. Serial No. 227.

Hoffman, ML. Affective and cognitive processes in moral internalization. In: Higgins, ET.; Ruble, D.; Hartup, WW., editors. Social cognition and social development. New York: Cambridge University Press; 1983. p. 236-274.

Hollingshead, AB. Four-factor index of social status Unpublished manuscript. Yale University; New Haven, CT: 1979.

Horton NK, Ray GE, Cohen R. Children's evaluations of inductive discipline as a function of transgression type and induction orientation. Child Study Journal. 2001; 31:71–93.

Krishnakumar A, Buehler C. Interparental conflict and parenting behaviors: A meta-analytic review. Family Relations. 2000; 49:25–44.

Lansford JE, Chang L, Dodge KA, Malone PS, Oburu P, Palmérus K, Bacchini D, Pastorelli C, Bombi AS, Zelli A, Tapanya S, Chaudhary N, Deater-Deckard K, Manke B, Quinn N. Cultural normativeness as a moderator of the link between physical discipline and children's adjustment: A comparison of China, India, Italy, Kenya, Philippines, and Thailand. Child Development. 2005; 76:1234–1246. [PubMed: 16274437]

Lansford JE, Criss MM, Dodge KA, Shaw DS, Pettit GS, Bates JE. Trajectories of physical discipline: Antecedents and developmental outcomes. Child Development. 2009; 80:1385–1402. [PubMed: 19765007]

Lansford JE, Wager LB, Bates JE, Dodge KA, Pettit GS. Reasoning, denying privileges, yelling, and spanking: Ethnic differences and associations with child externalizing behavior. Parenting: Science and Practice. 2012; 12:42–56.

Larzelere RE. Child outcomes of nonabusive and customary physical punishment by parents: An updated literature review. Clinical Child and Family Psychology Review. 2000; 3:199–221. [PubMed: 11225737]

Larzelere RE, Kuhn BR, Johnson B. The intervention selection bias: An under-recognized confound in intervention studies. Psychological Bulletin. 2004; 130:289–303. [PubMed: 14979773]

O'Connor TG, Hetherington EM, Clingempeel WG. Systems and bidirectional influences in families. Journal of Social and Personal Relationships. 1997; 14:491–504.

Oldershaw L, Walters GC, Hall DK. Control strategies and noncompliance in abusive mother-child dyads: An observational study. Child Development. 1989; 57:722–732. [PubMed: 3720400]

Reid, JS. Social interactional patterns in families of abused and non-abused children. In: Zahn-Waxler, C.; Cummings, EM.; Ionnatti, R., editors. Altruism and aggression: Biological and social origins. New York, NY: Cambridge University Press; 1986. p. 238-257.

Roberto AJ, Carlyle KE, Goodall CE. Communication and corporal punishment: The relationship between self-report parent verbal and physical aggression. Communication Research Reports. 2007; 24:103–111.

Roberto AJ, Carlyle K, McClure L. Communication and corporal punishment: The relationship between parents' use of verbal and physical aggression. Communication Research Reports. 2006; 23:27–33.

Shelton KH, Harold GT. Interparental conflict, negative parenting, and children's adjustment: Bridging links between parents' depression and children's psychological distress. Journal of Family Psychology. 2008; 22:712–724. [PubMed: 18855507]

Sillars, A.; Canary, DJ.; Tafoya, M. Communication, conflict, and the quality of family relationships. In: Vangelisti, AL., editor. Handbook of family communication. Mahwah, NJ: Erlbaum; 2004. p. 413-446.

Socha, TJ. Orchestrating and directing domestic potential through communication: Toward a positive reframing of discipline. In: Turner, LH.; West, RL., editors. The family communication sourcebook. Thousand Oaks, CA: Sage; 2006. p. 219-236.

Stoel RD, van den Wittenboer G, Hox J. Including time-invariant covariates in the latent growth curve model. Structural Equation Modeling. 2004; 11:155–167.

Stolk MN, Mesman J, van Zeijl J, Alink LRA, Bakermans-Kranenburg MJ, van IJzendoorn MH, Juffer F, Koot HM. Early parenting intervention aimed at maternal sensitivity and discipline: A process evaluation. Journal of Community Psychology. 2008; 36:780–797.

Straus MA. Measuring intrafamily conflict and violence: The Conflict Tactics (CT) Scales. Journal of Marriage and the Family. 1979; 21:75–88.

Straus MA, Stewart JH. Corporal punishment by American parents: National data on prevalence, chronicity, severity, and duration, in relation to child and family characteristics. Clinical Child and Family Psychology Review. 1999; 2:55–70. [PubMed: 11225932]

Vega EM, O'Leary KD. Test-retest reliability of the Revised Conflict Tactics Scales (CTS2). Journal of Family Violence. 2007; 22:703–708.

Willett, JB.; Sayer, AG. Cross-domain analyses of change over time: Combining growth modeling with covariance structure modeling. In: Marcoulides, GA.; Schumacker, RE., editors. Advanced structural equation modeling: Issues and techniques. Hillsdale, NJ: Erlbaum; 1995. p. 125-157.

Wilson SR, Cameron KA, Whipple EE. Regulative communication strategies within mother-child interactions: Implications for the study of reflection-enhancing parental communication. Research on Language and Social Interaction. 1997; 30:73–92.

Wilson, SR.; Morgan, WM. Persuasion and families. In: Vangelisti, AL., editor. Handbook of family communication. Mahwah, NJ: Erlbaum; 2004. p. 447-472.

Wilson, SR.; Shi, X.; Tirmenstein, L.; Norris, A.; Rack, JJ. Parental physical negative touch and child noncompliance in abusive, neglectful, and comparison families: A meta-analysis of observational studies. In: Turner, LH.; West, RL., editors. The family communication sourcebook. Thousand Oaks, CA: Sage; 2006. p. 237-258.

Zhou Q, Sandler IN, Millsap RE, Wolchik SA, Dawson-McClure SR. Mother-child relationship quality and effective discipline as mediators of the 6-year effects of the New Beginnings Program for children from divorced families. Journal of Consulting and Clinical Psychology. 2008; 76:579–594. [PubMed: 18665687]

Table 1

Descriptive Statistics for Study Variables

Variable	M	SD	N
1. Race (% African American)	14%		478
2. SES	40.78	13.68	468
3. Nonharsh discipline 1st	2.14	0.66	452
4. Nonharsh discipline 2nd	2.13	0.66	429
5. Nonharsh discipline 3rd	2.01	0.74	431
6. Harsh verbal discipline 1st	1.65	0.80	452
7. Harsh verbal discipline 2nd	1.67	0.75	429
8. Harsh verbal discipline 3rd	1.53	0.84	431
9. Physical discipline 1st	0.83	0.69	452
10. Physical discipline 2nd	0.70	0.62	429
11. Physical discipline 3rd	0.62	0.65	430
12. Interparental conflict 1st	0.67	0.54	409
13. Interparental conflict 2nd	0.64	0.50	395
14. Interparental conflict 3rd	0.64	0.51	387

Note. Nonharsh discipline, harsh verbal discipline, physical discipline, and interparental conflict were measured on a 0–4 scale (0 = never, 4 = almost every day).

Table 2

Correlations between Interparental Conflict and Discipline

Discipline	Interparental Conflict		
	1st grade	2nd grade	3rd grade
Nonharsh			
1st	.17[**]	.08	.10
2nd	.17[**]	.10[*]	.16[**]
3rd	.17[**]	.06	.21[***]
Harsh Verbal			
1st	.20[***]	.07	.15[**]
2nd	.22[***]	.18[***]	.20[***]
3rd	.16[**]	.05	.26[***]
Physical			
1st	.23[***]	.22[***]	.20[***]
2nd	.20[***]	.15[**]	.22[***]
3rd	.20[***]	.13[*]	.19[***]

[*]
$p < 0.05$.

[**]
$p < 0.01$.

[***]
$p < 0.001$.

Note. Sample size for correlations ranges from 358–409.

Table 3

Estimated Standardized Growth Parameters for the Final Fitted Model for Discipline and Interparental Conflict

	Interparental conflict (logged)	Nonharsh discipline	Harsh verbal discipline (logged)	Physical discipline (logged)
Mean level at 1st grade (intercept)	1.373 ***	1.810 ***	0.789 ***	0.567 ***
Increases to mean level				
African American[a]	−0.090	−0.153 **	−0.101 *	0.051
SES	−0.068	0.046	0.078	−0.208 ***
Externalizing (age 5)	−0.054	0.271 ***	0.151 **	0.250 ***
Divorce status[b]	0.246 ***	0.129	0.143 *	0.109
Mean change per year (slope)	−0.167 *	−0.073	0.002	−0.068 *
Increases to rate of true change				
African American[a]	−0.072	−0.144	−0.023	−0.107
SES	0.216	−0.036	−0.115 *	0.062
Externalizing (age 5)	0.272 *	0.151	0.119	−0.034
Divorce status[b]	0.194	−0.044	−0.272 *	−0.134
Correlation - Intercept and Slope	−.472 *	−.143	−0.200	−0.242

*
$p < 0.05$.

**
$p < 0.01$.

***
$p < 0.001$.

[a] Race is coded 0 = European American, 1 = African American and other.

[b] Divorce/separation status is coded 0 = not during grades 1 through 3, 1 = divorce some time during grades 1 through 3. $N = 478$.

Table 4

Estimated Standardized Cross-Domain Latent Growth Curve Parameters for Physical Discipline and Interparental Conflict

	Model 1	Model 2	Model 3	Model 4
Mean level at 1st grade – Intercept (I)				
Interparental Conflict	1.37***	1.36***	1.35***	1.35***
Physical Discipline	0.57***	0.57***	0.59***	0.59***
Mean change per year – Slope (S)				
Interparental Conflict	–0.16*	–0.09	–0.15*	–0.01
Physical Discipline	–0.07^{+}	–0.07^{+}	–0.02	–0.06
Correlations				
Interparental Conflict - IS	–0.32*	–0.36^{+}	–0.38*	–0.34
Physical Discipline - IS	–0.20	–0.20	–0.16	–0.14
Intercepts - IPC and Discipline	0.27***	0.32***	0.32***	0.39***
Slopes - IPC and Discipline	0.26	0.36	0.40^{+}	0.60*
Cross-regressions				
Discipline Slope on IPC Intercept			–0.26*	–0.31*
IPC Slope on Discipline Intercept		–0.21		–0.30*
Model Fit				
RMSEA	0.023	0.030	0.003	0.000
AIC	120.22	120.26	118.06	116.24
BIC	122.68	122.76	120.56	118.79
χ^2(df)	16.22 (13)	14.26 (12)	12.06 (12)	8.24 (11)
$\Delta\chi^2$		1.96	4.16*	3.82

$^{+}p < 0.06.$

$^{*}p < 0.05.$

$^{**}p < 0.01.$

$^{***}p < 0.001.$

IPC = interparental conflict. IS = intercept and slope. $N = 478$.