Published in final edited form as:

J Fam Psychol. 2006 June ; 20(2): 217–226. doi:10.1037/0893-3200.20.2.217.

Aggressive Marital Conflict, Maternal Harsh Punishment, and Child Aggressive-Disruptive Behavior: Evidence for Direct and Mediated Relations

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Abstract

Direct associations between aggressive marital conflict and child aggressive-disruptive behavior at home and school were explored in this cross-sectional study of 360 kindergarten children. In addition, mediated pathways linking aggressive marital conflict to maternal harsh punishment to child aggressive-disruptive behavior were examined. Moderation analyses explored how the overall frequency of marital disagreement might buffer or exacerbate the impact of aggressive marital conflict on maternal harsh punishment and child aggressive-disruptive behavior. Hierarchical regressions revealed direct pathways linking aggressive marital conflict to child aggressive-disruptive behavior at home and school and a partially mediated pathway linking aggressive marital conflict to child aggressive-disruptive behavior at home. Further analyses revealed that rates of marital disagreement moderated the association between aggressive marital conflict and child aggressive-disruptive behavior at home, with an attenuated association at high rates of marital disagreement as compared with low rates of marital disagreement.

Keywords

marital conflict; marital disagreement; punishment; aggressive behavior

Children exposed to marital conflict often show significant behavioral maladjustment, particularly elevated aggressive-disruptive behavior problems and conflictual relationships with siblings and peers (for review, see Cummings & Davies, 1994; Grych & Fincham, 1990). Exposure to marital conflict is upsetting to children and appears to elicit negative behavioral reactions through direct and mediated pathways. For example, Miller, Cowan, Cowan, Hetherington, and Clingempeel (1993) found a direct path from marital conflict to child externalizing behavior. In contrast, Mann and MacKenzie (1996) found only an indirect effect of overt marital conflict on child oppositional behavior during middle childhood, which was mediated by parent-reported rejection and inept discipline. Finally, Buehler and Gerard (2002) found both direct and mediated paths of influence, with parental reports of involvement and harsh discipline partially mediating the relationship between marital conflict and their preschoolers' global maladjustment.

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The direct and mediated effects of marital conflict on child maladjustment appear dependent, in part, on its form of expression (Cummings & Davies, 1994; Grych & Fincham, 1990). Marital conflict that involves physical aggression, nonverbal or verbal hostility, or threat to the intactness of the family has been described as “destructive” because it is linked with child reactive distress and aggressive behavior (Cummings, Goeke-Morey, & Papp, 2003, 2004). In the present study, we examined the aggressive dimension of destructive marital conflict: nonverbal, verbal, and physical expressions of hostility toward a spouse. Aggressive marital conflict fits within the broader construct of destructive marital conflict, representing the overtly hostile interpersonal behaviors within that domain. Aggressive and destructive conflict strategies have been distinguished from “constructive” marital disagreement, such as calm discussion and problem-solving support, which are significantly less likely to evoke distress responses from children (Cummings et al., 2003).

Influential theoretical models propose that aggressive marital conflict may impact children directly, yet each differs in its relative emphasis on behavioral, cognitive, and emotional domains of impact. For example, according to social learning theory, children exposed to interparental aggression may model those conflict behaviors and display aggressive behaviors in subsequent interpersonal interactions (Bandura, 1977). The cognitive-contextual framework attributes direct transmission to children's negative cognitive representations of aggressive marital conflict, including self-blame and expectations of threat (Grych & Fincham, 1990). According to the emotional security hypothesis, exposure to aggressive marital conflict disrupts children's sense of emotional security, evidenced by increased behavioral reactivity to marital conflict and negative internal representations of the interparental relationship (Davies, Harold, Goeke-Morey, & Cummings, 2002). Negative child emotional reactions, in turn, are associated with behavioral adjustment problems (Cummings et al., 2003).

Indirect effect models, on the other hand, attribute the negative impact of aggressive marital conflict primarily to its disruption of parent-child relationships and parenting practices. For example, according to the spillover hypothesis, negative affect elicited in the marital dyad may increase parental negativity and deplete parental coping resources, contributing to more irritable and punitive discipline practices (Erel & Burman, 1995). In addition, parents who have learned to react to interpersonal conflict with aggressive tactics may use similar harsh and coercive strategies when confronting child misbehaviors, thereby unwittingly modeling and reinforcing aggressive exchanges with their children (Patterson, 2002). In fact, aggressive marital conflict has been linked to inconsistent and harsh discipline (Buehler & Gerard, 2002; Frosch & Mangelsdorf, 2001; Gonzales, Pitts, Hill, and Roosa, 2000; Mann & MacKenzie, 1996), which, in turn, is implicated in developmental models of child aggressive behavior problems (Patterson, 2002).

The damaging effects of exposure to aggressive marital conflict stand in some contrast to studies examining the impact of general marital disagreements on child adjustment. For example, Cookston, Harrist, and Ainslie (2003) found no relation between levels of “instrumental discord” (e.g., disagreements in areas of marital decision making such as finances, time management, and goal setting) and children's negative affectivity in peer relations. Jouriles, Bourg, and Farris (1991) found no relation between parental reports of disagreements on marital issues (e.g., handling of family finances) and child behavior problems, although child rearing disagreements did predict elevated child difficulties (by parent report). Finally, Cummings et al., (2004) reported that marital conflict concerning the child and marriage predicted child aggression in the home, but topics concerning social and work matters did not. The absence of relations between general marital disagreements and child outcomes may reflect the possibility that such disagreements can be managed in constructive or destructive ways, with corresponding positive or negative effects on child behavior

(Cummings et al., 2004; Easterbrooks, Cummings, & Emde, 1994; Goeke-Morey, Cummings, Harold, & Shelton, 2003; Goodman, Barfoot, Frye, & Belli, 1999).

Although prior research suggests that it is exposure to aggressive marital conflict that contributes to child behavioral maladjustment, rather than marital disagreement, rarely have these two dimensions of marital functioning been examined together. One unanswered question involves the extent to which the broader context of marital disagreement may moderate the impact of aggressive marital conflict on child behavior problems. Although no prior study has addressed this issue directly, related studies suggest that high rates of marital disagreement could either exacerbate or buffer the negative effects of aggressive marital conflict on child aggression.

For instance, it is possible that high rates of marital disagreement may serve as a source of stress that increases the likelihood of aggressive marital conflict and exacerbates the impact on parenting difficulties and child behavior problems. Indeed, in one recent study (Margolin & Gordis, 2003), aggressive marital conflict was linked with parents' higher child abuse potential only when mothers were experiencing high levels of family stress (financial stress, parenting stress). Potentially, frequent marital disagreements serve as a source of stress and accentuate the degree to which aggressive marital conflict spills over and disrupts parenting. In addition, in the context of high levels of aggressive marital conflict, children may interpret even mild-mannered marital disagreements as precursors of threatening interparental conflict, inducing heightened distress and impeding effective coping, thus increasing child negative reactions and behavior problems (Cummings & Davies, 1994; Thompson & Calkins, 1996).

In contrast, it is possible that aggressive marital conflicts are less distressing to children when they occur in the context of frequent marital disagreements, when the destructive conflict children observe on occasion is "buffered" by more frequent observations of constructive marital conflict, in which marital disagreements are resolved peacefully. The context of more frequent marital disagreements may expose children to a range of marital conflict strategies, including both destructive strategies linked with negative effects on parenting and child behavior and constructive strategies that may enhance child social problem-solving skills (Cummings et al., 2004; Goeke-Morey et al., 2003; Goodman et al., 1999). Parents who disagree less often, but aggress when they have conflicts, may lack constructive strategies for interpersonal problem solving and instantiate a limited set of aggressive and maladaptive interpersonal problem-solving styles in their children. These parents may also be more likely than parents with a broader array of conflict management strategies to revert to hostile discipline strategies when managing child misbehavior. Hence, high rates of marital disagreement may not exacerbate, and may even "buffer," the impact of aggressive marital conflict on parenting and child behavior problems.

Further research is clearly needed to better understand the links between aggressive marital conflict and child aggressive-disruptive behavior and to explore the potential moderating effects of marital disagreement. In addition, strong, multimethod measurement strategies are important. Among studies examining pathways from marital functioning to parenting and child behavior, rarely have independent informants provided measures of each construct, leaving the results vulnerable to reporter biases and common method variance that may inflate estimates of relations between marital conflict, parenting, and child outcomes (Fauber, Forehand, Thomas, and Wierson, 1990; Gonzales et al., 2000).

The Present Study

The present study examined pathways linking maternal perceptions of aggressive marital conflict with child aggressive-disruptive behavior at home and school. Using a community-

based sample of 360 kindergarten children, direct and mediated relations linking aggressive marital conflict with child aggressive-disruptive behaviors were explored. Maternal harsh punishment was examined as a possible mediator of this link. In addition, rate of general marital disagreement was examined as a potential moderator of the links between aggressive marital conflict and (a) maternal harsh punishment, (b) child aggressive-disruptive behavior at home, and (c) child aggressive-disruptive behavior at school. To reduce biases associated with single-source measures, multiple measures were used, including maternal reports of aggressive marital conflict and marital disagreement, interviewer ratings of maternal harsh punishment, and teacher and maternal reports of child aggressive-disruptive behaviors.

A direct link was predicted between aggressive marital conflict and child aggressive-disruptive behavior at home and school. A partially mediated path was also expected, with aggressive marital conflict predicting maternal harsh punishment that, in turn, would be linked with child aggressive-disruptive behavior. We anticipated that maternal harsh punishment would account for some, but not all, of the variance linking aggressive marital conflict and child aggressive-disruptive behavior, reflecting partial mediation and evidence for both direct and indirect paths of influence between aggressive marital conflict and child behavior problems.

It was also hypothesized that rates of marital disagreement would moderate the links between aggressive marital conflict and (a) maternal harsh punishment, (b) child aggressive-disruptive behavior at home, and (c) child aggressive-disruptive behavior at school. That is, it was anticipated that the strength of relations between aggressive marital conflict and these outcome variables would vary as a function of the rate of marital disagreement (Baron & Kenny, 1986). It is interesting that prior literature suggests that rates of marital disagreement may either exacerbate or buffer the impact of aggressive marital conflict on maternal parenting and child aggressive-disruptive behavior. Given the lack of prior research investigating these possibilities directly, specific hypotheses were not generated, and analyses must be considered exploratory.

Method

Participants

Participants were 360 kindergarten children and their mothers from the normative and high-risk samples of the Fast Track Project ($n = 1199$), a multisite study of the development and prevention of conduct problems (Conduct Problems Prevention Research Group, 1992). Participants resided in four geographically diverse regions of the United States: Durham, North Carolina; Nashville, Tennessee; Seattle, Washington; and rural central Pennsylvania. To select the sample, kindergarten teachers at each site rated the aggressive-disruptive behaviors of each of the children in their classrooms, using the 10-item Authority Acceptance scale of the Teacher Observation of Classroom Adaptation—Revised (Werthamer-Larsson, Kellam, and Oveson-McGregor, 1990). Approximately 100 children at each site were randomly selected for the normative sample to represent the population according to race, gender, and distribution of behavior problems. To select the high-risk sample, parents of children who scored in the top 35% at each site on teacher ratings of behavior problems were contacted by telephone or in person and asked to rate the frequency of child behavior problems at home on a 24-item scale. Children's summed scores on the two screen measures (teacher and parent ratings of behavior problems) were averaged; children who fell in the top 10% to 15% at each site on this combined screen were recruited as high-risk participants.

The sample for the present study included normative and high-risk families who fit the following criteria: (a) the biological mother of the target child was married and living together with her spouse (father or stepfather) and the target child for at least 2 years prior to data collection, and (b) the target child's mother completed the measure of aggressive marital

conflict during the child's kindergarten year. Sixty-one cohabiting couples were excluded from this sample. The sample included 217 (60%) boys and 143 (40%) girls. The ethnic composition was 79% ($n = 284$) European American, 16% ($n = 56$) African American, and 4% ($n = 20$) other minority groups. Couples were married for a mean of 9.74 years. Based on the Hollingshead Occupational Scale (Hollingshead, 1975), participating families had occupations at the low to middle socioeconomic status level.

Measures of marital functioning and maternal interview data were collected during a summer home interview following the child's kindergarten year. Participation required informed parental consent and child assent. Teachers completed measures of child aggressive-disruptive behavior during the spring of the kindergarten year. No significant differences were found between families with complete and incomplete data on any of the measures used in the present study (all p values $> .10$).

Measures

Aggressive marital conflict—On the Conflict Tactics Scale (Straus, 1979), mothers used a seven-point response scale (0, never to 6, almost every day) to indicate the frequency with which they and their spouses used aggressive conflict tactics in response to disagreements during the past year: hostile-indirect (e.g., stomped out of the room or house), verbal aggression (e.g., yelled, insulted, or swore at your partner), and physical aggression (e.g., hit or tried to hit your partner). Subscale scores were moderately correlated (r ranged from .43–.70) and were summed to create a total score for aggressive marital conflict (sample $\alpha = .88$). Although exclusive reliance on mothers' perceptions of their own and their spouses' aggressive marital conflict tactics is a limitation of the present study, previous research has revealed moderate relations (.34–.56) between mothers' and fathers' reports of marital conflict (Cummings et al., 2003; Kitzman & Cohen, 2003; Rinaldi & Howe, 2003).

Marital disagreement—On the Relationship Adjustment Scale, adapted from the Dyadic Adjustment Scale (Spanier, 1976), mothers indicated the amount of disagreement they and their spouses experienced in 14 domains of joint decision making (e.g., household jobs, handling family money, amount of time spent together). Items were rated on a six-point scale (0, always disagree to 5, always agree) and were summed to create a total score (sample $\alpha = .84$). Items were reverse-scored such that higher scores reflected higher rates of marital disagreement.

Maternal harsh punishment—Maternal use of physical or punitive punishment was measured with interviewer ratings. During the summer interview, interviewers spoke with the mother of each target child for approximately 30 minutes and asked a series of questions about how she interacted with her child and how she responded to her child's misbehaviors. Following this discussion, the parent interviewer made global ratings regarding the mother's (a) use of harsh punishment and (b) discipline resulting in physical harm prior to and during the kindergarten year, using a five-point Likert scale (e.g., 1, nonrestrictive, mostly positive to 5, severe, strict, and often physical). These four ratings were summed and averaged to create a total score ($\alpha = .85$). Interviewers received extensive training, including watching videotapes of interviews, observing live interviews, practicing interviews, and conducting pilot interviews under supervision. Raters were expected to achieve a minimum reliability criterion of .80 (intraclass correlation) before conducting independent home interviews.

Aggressive-disruptive behaviors—Mothers and kindergarten teachers completed the 113-item Child Behavior Checklist (CBCL)-Parent Report Form and -Teacher Report Form, respectively, which are reliable and valid measures of child behavior (Achenbach, 1991). The

externalizing behavior subscales of the CBCL-Parent Report Form and CBCL-Teacher Report Form were used in the present study (sample α s = .88 and .97, respectively).

Results

Preliminary Analyses

Initially, Pearson and point-biserial correlations were computed to identify potential demographic confounds and to describe associations among all measures used in this study (see Table 1). Of the demographics explored (i.e., maternal occupation, length of marriage, site, child gender, and race), only maternal occupation, site, and child race were consistently related to marital, maternal parenting, and child behavior variables. These demographic variables were covaried in all regression analyses.

It was hypothesized that aggressive marital conflict would be associated with higher levels of maternal harsh punishment and child aggressive-disruptive behavior. As shown in Table 1, Pearson correlations revealed significant associations in the expected direction linking aggressive marital conflict with maternal harsh punishment and child aggressive-disruptive behavior, ranging in magnitude from $r = .17$ to $r = .29$. Analyses also revealed significant associations between marital disagreement and observer ratings of maternal harsh punishment ($r = .15$) and maternal ratings of child aggressive-disruptive behavior ($r = .19$). Partial correlations were also computed. When the effects of marital disagreement were partialled out, aggressive marital conflict still made unique contributions in the expected direction to the prediction of maternal harsh punishment and child aggressive-disruptive behavior, with partial correlations ranging in magnitude from $r = .16$ to $r = .25$. In contrast, no maternal parenting or child behavior variables were significantly related to marital disagreement when the effects of aggressive marital conflict were partialled out, but a nonsignificant trend remained for the relation between marital disagreement and maternal ratings of child aggressive-disruptive behavior ($r = .11$). Aggressive marital conflict and marital disagreement were moderately correlated ($r = .45$).

Pathways From Aggressive Marital Conflict to Child Aggressive-Disruptive Behavior

Regression analyses were conducted separately for the two dependent variables: (a) child aggressive-disruptive behavior at home (as reported by mothers) and (b) child aggressive-disruptive behavior at school (as reported by teachers). Maternal occupation, child race, and site served as covariates in all regression analyses.

First, to examine whether maternal harsh punishment mediated the relation between aggressive marital conflict and child aggressive-disruptive behavior at home (see Figure 1), the Baron and Kenny (1986) procedure was used. Baron and Kenny (1986) recommend three regression equations to test for mediation. In the first regression equation, aggressive marital conflict was associated with maternal harsh punishment ($\beta = .29, p < .001$). In the second equation, aggressive marital conflict was associated with child aggressive-disruptive behavior ($\beta = .23, p < .001$). In the third equation, aggressive marital conflict ($\beta = .14, p < .05$) and maternal harsh punishment ($\beta = .30, p < .001$) were each associated with child aggressive-disruptive behavior. Thus, when maternal harsh punishment was included in the equation, aggressive marital conflict was still significantly associated with child aggressive-disruptive behavior at home, providing evidence for direct relations between aggressive marital conflict and child aggressive-disruptive behavior at home. However, the relation between aggressive marital conflict and child aggressive-disruptive behavior was significantly reduced with the addition of maternal harsh punishment ($z = 3.96, p < .001$; Sobel, 1988), indicating partial mediation.

A similar set of regressions was computed to examine whether maternal harsh punishment mediated the relation between aggressive marital conflict and child aggressive-disruptive behavior at school (see Figure 2). In the first regression equation, aggressive marital conflict was associated with maternal harsh punishment ($\beta = .29, p < .001$). In the second equation, aggressive marital conflict was associated with child aggressive-disruptive behavior ($\beta = .21, p < .01$). In the third equation, aggressive marital conflict ($\beta = .12, p < .05$) and maternal harsh punishment ($\beta = .13, p < .05$) were each associated with child aggressive-disruptive behavior. Thus, when maternal harsh punishment was included in the equation, aggressive marital conflict remained significantly associated with child aggressive-disruptive behavior at school, providing evidence for direct relations between aggressive marital conflict and child aggressive-disruptive behavior at school. With the addition of maternal harsh punishment, the link between aggressive marital conflict and child aggressive-disruptive behavior was only slightly attenuated, at the nonsignificant trend level ($z = 1.95, p < .10$; Sobel, 1988), providing little evidence for mediation by maternal harsh punishment.

Exploring the Moderating Effect of Marital Disagreement

It was also hypothesized that marital disagreement would moderate relations between aggressive marital conflict and (a) maternal harsh punishment, (b) child aggressive-disruptive behavior at home, and (c) child aggressive-disruptive behavior at school. A moderating variable affects the relationship between a predictor and a dependent variable, such that the link between the predictor and dependent variable varies as a function of the level of the moderator variable (Baron & Kenny, 1986). To examine the moderation hypothesis, the procedure described by Baron and Kenny (1986) was used. Specifically, separate hierarchical multiple regression analyses were conducted to examine the moderating effects of marital disagreement on each dependent variable (maternal harsh punishment, child aggressive-disruptive behavior at home, child aggressive-disruptive behavior at school). In each regression equation, covariates (site, child race, maternal occupation) were entered on the first step, aggressive marital conflict and marital disagreement were entered on the second step, and the product (i.e., interaction) of aggressive marital conflict and marital disagreement was entered on the third step (see Table 2). Moderation is indicated by a significant interaction effect on the third step. In these analyses, aggressive marital conflict and marital disagreement were mean-centered to facilitate interpretation (Holmbeck, 2002).

As shown in Table 2, analyses revealed significant main effects of aggressive marital conflict on maternal harsh punishment and child aggressive-disruptive behavior at home and school but no significant main effects of marital disagreement. Marital disagreement was associated with child aggressive-disruptive behavior at home at the nonsignificant trend level. A significant interaction between aggressive marital conflict and marital disagreement did not emerge for analyses predicting maternal harsh punishment and child aggressive-disruptive behavior at school. However, a significant interaction effect did emerge in the equation predicting child aggressive-disruptive behavior at home ($\beta = -.14, p < .01$), indicating that marital disagreement moderated the link between aggressive marital conflict and child aggressive-disruptive behavior at home (see Table 2).

Post hoc analyses were conducted to interpret the nature of the significant interaction effect (i.e., whether aggressive marital conflict was associated with child aggressive-disruptive behavior at high and/or low rates of marital disagreement). According to post hoc probing procedures recommended by Holmbeck (2002), conditional moderator variables representing high (centered at 1 *SD* above the mean) and low (centered at 1 *SD* below the mean) rates of marital disagreement were first computed. Next, variables representing interactions (i.e., products) between aggressive marital conflict and each of the conditional marital disagreement variables were computed. Finally, regressions were conducted separately for each conditional

moderator variable. Each regression equation included the covariates (site, child race, maternal occupation), aggressive marital conflict, one of the conditional marital disagreement variables (high or low marital disagreement), and the interaction between aggressive marital conflict and one of the conditional marital disagreement variables. With zero substituted for the conditional marital disagreement variable in each equation (which is the value of marital disagreement represented by each equation), separate intercepts and slopes were generated for the relations between aggressive marital conflict and child aggressive-disruptive behavior at both conditions of marital disagreement (1 *SD* below the mean and 1 *SD* above the mean) (Holmbeck, 2002). As illustrated in Figure 3, analyses revealed a significant link between aggressive marital conflict and child aggressive-disruptive behavior at 1 *SD* below the mean of marital disagreement ($\beta = .34, p < .01$) and no significant relation between aggressive marital conflict and child aggressive-disruptive behavior at 1 *SD* above the mean of marital disagreement ($\beta = .09, p = .18$), indicating an attenuated link between aggressive marital conflict and child aggressive-disruptive behavior at home at higher rates of marital disagreement, as compared with lower rates of marital disagreement.

Discussion

The present study documented direct and mediated pathways linking maternal perceptions of aggressive marital conflict with child aggressive-disruptive behavior at home and a direct pathway linking aggressive marital conflict with child aggressive-disruptive behavior at school. Maternal harsh punishment partially mediated the link between aggressive marital conflict and child aggressive-disruptive behavior at home but did not appear to mediate the link between aggressive marital conflict and aggressive-disruptive behavior at school.

Direct Links Between Aggressive Marital Conflict and Child Aggressive-Disruptive Behavior

These results suggest that aggressive marital conflict has a direct impact on child aggressive-disruptive behavior at home and school. According to social learning theory, exposure to aggressive marital conflict provides children with a model for aggressive responding that children imitate and generalize to interpersonal conflict situations at home and school (Bandura, 1977; Cummings & Davies, 1994). Repeated exposure to aggressive marital conflict may also sensitize children to the cues of impending conflict, such that even harmless disagreements between peers are interpreted as signs of impending conflict, which, in turn, heightens distress and triggers aggressive reactions (Thompson & Calkins, 1996). In addition, the emotional security and cognitive-contextual frameworks suggest that negative emotional reactivity and negative interparental representations in response to repeated marital conflict may begin to generalize across time and settings (Davies et al., 2002; Grych & Fincham, 1990). Furthermore, preoccupation with emotional security in response to interparental conflict may impede the pursuit of developmental goals such as emotion regulation and social competence and thereby thwart the development of prosocial alternatives to aggressive and antisocial behavior (Davies et al., 2002).

Mediated Links Between Aggressive Marital Conflict and Child Aggressive-Disruptive Behavior

In addition to the direct links found between aggressive marital conflict and child aggressive-disruptive behavior at home and school, support for a mediated pathway through maternal harsh punishment was also evident. Maternal harsh punishment accounted for 40% of the variance linking aggressive marital conflict with child aggressive-disruptive behavior at home. These results are consistent with the well-established spillover hypothesis, in which negative affect and aggressive behavior from the marital relationship influence the parent-child relationship, contributing to irritable and harsh parental reactions to child misbehavior (Erel

& Burman, 1995). Developmental research links harsh parenting with child aggressive behavior, through processes of modeling and negative reinforcement (Patterson, 2002).

It is noteworthy that the mediating influence of maternal harsh punishment was evident for child aggressive-disruptive behavior displayed at home, but less so at school. An important distinction between these contexts is that child aggressive-disruptive behavior at home often involves direct disciplinary confrontations with the mother, whereas aggressive-disruptive behavior at school typically involves interactions with the teacher or peers. Possibly, the impact of aggressive marital conflict on child behavior at school (when a parent is not present) is mediated primarily by self-system processes such as emotional distress and insecurity (Davies et al., 2002) and maladaptive social information processing (Grych & Fincham, 1990). Indeed, Dodge, Bates, and Pettit (1990) found that disturbed social information processing (e.g., hostile attributional biases, positive evaluations of outcomes of aggression) mediated the impact of physical harm at home on child aggressive behavior at school, suggesting that the generalization of socialization experiences to child behavior at school is influenced heavily by the child's social cognitions, emotion regulatory processes, and behavioral repertoire. Hence, the results show independent (rather than mediated) prediction of child aggressive-disruptive behaviors at school by aggressive marital conflict.

In contrast, aggressive-disruptive behaviors at home typically involve direct interactions with the mother. Mother's discipline practices and responsivity may be influenced by her mood, and negative maternal mood may increase harsh punishments and coercive interactions that escalate child aggressive behaviors by means of modeling and negative reinforcement (Patterson, 2002). To the degree that aggressive marital conflict "spills over" to increase maternal irritability and propensity to respond coercively to child misbehavior, it may thereby affect child aggressive behavior through its impact on maternal harsh punishment. Hence, in the home setting, similar to the school setting, there is evidence that aggressive marital conflict makes independent contributions to child aggressive-disruptive behaviors. However, in the home, where aggressive marital discord may directly affect maternal discipline, a mediated pathway of influence is also evident. It should also be noted, however, that it is possible that common source variance contributed to the different pattern of findings for aggressive-disruptive behavior at home (maternal report) versus school (teacher report).

Disentangling Aggressive Marital Conflict from Marital Disagreement

The present results confirm the importance of distinguishing between aggressive marital conflict and rates of general marital disagreement because aggressive marital conflict showed consistent and significant associations with maternal harsh punishment and child aggressive-disruptive behavior, whereas rates of general marital disagreement were not significantly associated with maternal harsh punishment or child aggressive-disruptive behavior after controlling for aggressive marital conflict. These results are consistent with the view that marital disagreements alone are not necessarily problematic; rather, the ways in which marital disagreements are handled can be harmful to parenting and child adjustment (Cummings et al., 2004; Easterbrooks, Cummings, & Emde, 1994; Goeke-Morey et al., 2003; Goodman et al., 1999).

Although marital disagreement itself was not significantly related to maternal harsh punishment or child aggressive-disruptive behavior, it moderated the relation between aggressive marital conflict and child aggressive-disruptive behavior at home. Specifically, although aggressive marital conflict was not significantly linked with child aggressive-disruptive behavior at elevated rates of marital disagreement, it was significantly linked with child aggressive-disruptive behavior at low rates of marital disagreement. Nonetheless, as illustrated in Figure 3, only at the high end of aggressive marital conflict would the level of child aggressive-disruptive behavior in the context of low marital disagreement reach the level

of child aggressive-disruptive behavior in the context of high marital disagreement. Thus, these results do not suggest that a high rate of marital disagreement is protective, despite its apparent role in the attenuated link between aggressive marital conflict and child aggressive-disruptive behavior at home.

These results do, however, suggest that elevated rates of marital disagreement do not exacerbate the negative effects of aggressive marital conflict on child aggressive-disruptive behavior and that aggressive marital conflict is less predictive of child aggressive-disruptive behavior at high rates of marital disagreement than at low rates. This finding appears somewhat counterintuitive and inconsistent with evidence for cumulative stress (e.g., Margolin & Gordis, 2003) and sensitization (Cummings & Davies, 1994; Thompson & Calkins, 1996) hypotheses. However, as an opposing force to the potential negative implications of cumulative stress and sensitization mechanisms, it is possible that high marital disagreement in combination with high aggressive marital conflict reflects some amount of constructive as well as destructive interpersonal problem-solving strategies for children to observe. In contrast, low marital disagreement in combination with high aggressive marital conflict may reflect a narrow and coercive style of interpersonal problem solving for children to observe. That is, parents' reliance on aggressive strategies for solving marital problems may provide a limited and maladaptive problem-solving set for their children to draw from in their own interpersonal interactions, resulting in increased child aggressive behavior. Thus, although elevated aggressive marital conflict may be harmful to children at any level of marital disagreement, its mechanism of impact may be influenced by the context of general marital disagreement also occurring in the marriage.

The same pattern of moderation was not observed for maternal harsh punishment and child aggressive-behavior at school, yet again, increasing rates of marital disagreement did not appear to buffer or exacerbate the negative influence of aggressive marital conflict. These findings clearly require further study and replication before conclusions are drawn.

Limitations

Several limitations of the present study should also be noted. First, the sample of the present study included only children of married, biological mothers, limiting the extent to which these findings can be generalized to the broader population. Second, the measure of aggressive marital conflict in the present study relied exclusively on mothers' perceptions of their own and their spouses' aggressive marital conflict strategies. The absence of data regarding the perspective of fathers on marital functioning and the impact of fathers' parenting leaves a significant source of influence untapped. Third, the cross-sectional nature of the present study precluded conclusions about direction of effects. Although we specified a pathway from marital functioning, to maternal harsh punishment, to child aggressive-disruptive behavior, it is likely that relations among these constructs are complex and multidirectional. Finally, the relations among marital functioning, maternal harsh punishment, and child aggressive-disruptive behavior were modest and must be interpreted with caution. In support of the results of the present study, however, these findings are generally consistent with a large body of research on the interrelations among marital conflict, parenting, and child adjustment.

Implications and Future Directions

Although the present study provided evidence for both direct and mediated pathways linking aggressive marital conflict and child aggressive-disruptive behavior, it was not designed to piece apart the domains of impact or underlying mechanisms purported by leading theoretical models. These results leave open the possibilities that behavioral shaping, cognitive appraisals, emotional security, and disrupted parenting practices each play roles in the transmission of aggressive behavior from marital interactions to child behavior. Tentative interpretations of

these findings suggest that self-system processes, such as social information processing and emotional security, are operational in cross-context transmission of aggressive behavior (e.g., home to school) and that spillover and social learning processes, such as modeling and reinforcement, are operational in same-setting transmission of aggressive behavior (e.g., home to home). However, as advocated by Davies et al. (2002), it is important for future research to compare the mechanisms proposed by theoretical models more directly, to further elucidate the processes by which aggressive marital conflict impacts child adjustment.

The findings of the present study also point toward several clinical implications. The direct links between aggressive marital conflict and child aggressive-disruptive behavior suggest that intervening at the parent-child level alone (e.g., parent training) may be insufficient to protect children from the negative effects of aggressive marital conflict. The absence of compelling evidence that nonaggressive marital disagreement predicts maternal harsh punishment or child aggressive-disruptive behavior suggests that constructive problem-solving training for couples should be productive. However, given the apparent negative impact of conflict that escalates to the level of aggression, marital interventions that address interpersonal problem solving alone may be insufficient as well. Greater attention to anger management and emotion regulation issues may further prevent aggressive marital conflict and thereby exert a protective influence on parenting and child behavioral adjustment.

Acknowledgments

This work was supported by National Institute of Mental Health (NIMH) Grants R18MH48083, R18MH50951, R1MH50952, and R1MH50953. Additional support was provided by the National Institute of Drug Abuse and the Center for Substance Abuse Prevention (through memorandums of agreement with NIMH). This work was also supported in part by Department of Education Grant S18443002 and NIMH Grants K05MH00797 and K05MH01027. We thank the families and schools who participated in the Fast Track Project for their support and Susan McHale and Mark Feinberg for their insightful comments on earlier drafts of this article.

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Figure 1.

Paths to child aggressive-disruptive behavior at home. Values are standardized regression coefficients. For the final model in mediation analyses, $R^2 = .17$, $F(7, 336) = 9.88$, $p < .001$.

* $p < .05$. ** $p < .01$.

Figure 2.

Paths to child aggressive-disruptive behavior at school. Values are standardized regression coefficients. For the final model in mediation analyses, $R^2 = .12$, $F(7, 298) = 5.53$, $p < .001$.

* $p < .05$. ** $p < .01$.

Figure 3.
Relations between aggressive marital conflict and child aggressive-disruptive behavior at home at high and low rates of marital disagreement.

Table 1
Pearson and Point-Biserial Correlations among Demographics, Marital Functioning, Maternal Harsh Punishment, and Child Aggressive-Disruptive Behavior

Variable	Marital disagreement	Aggressive marital conflict	Maternal harsh punishment	Child aggressive- disruptive-teacher	Child aggressive- disruptive-mother
Length of marriage	-.02	-.10	-.03	-.10	-.04
Maternal occupation	.08	-.13*	-.20**	-.05	-.11*
Child gender	.04	-.02	-.04	-.08	-.02
Child race	-.11*	.03	-.01	.16**	-.11*
Site	.12	.13	.26**	.26**	.20**
Marital disagreement	—	.45**	.15**	.05	.19**
Agg. marital conflict		—	.29**	.17**	.24**
Mat. Harsh Punish.			—	.21**	.34**
Child Agg. Beh.-T				—	.34**

Note. For child gender, 0 = male; 1 = female. For child race, 0 = Caucasian; 1 = Other. Site was dummy-coded and entered as a block in a multiple regression equation; correlations for site are *Rs*. Agg. = Aggressive; Mat. = Maternal; Punish. = Punishment; Beh. = Behavior; T = Teacher Report.

*
 $p < .05$.
**
 $p < .01$.

Hierarchical Multiple Regression Analyses Predicting Maternal Harsh Punishment and Child Aggressive-Disruptive Behavior

Table 2

Predictors	Maternal harsh punishment			Child aggressive-disruptive (school)			Child aggressive-disruptive (home)		
	B	SE	β	ΔR^2	B	SE	β	ΔR^2	ΔR^2
Step 1				.10****				.08****	.04****
Site 1	.47	.10	.26***		7.15	1.90	.22***		
Site 2	.07	.12	.04		5.03	2.31	.15*		
Site 3	.09	.09	.06		1.97	1.70	.07		
Child race	-.03	.10	-.02		2.29	1.87	.08		
Mat. occupation	-.04	.01	-.18***		-.28	.23	-.07		
Step 2				.08****				.02**	.06****
AMC	.06	.01	.26****		.57	.24	.15*		
MD	.01	.00	.07		.03	.09	.02		
Step 3				.00				.00	.02***
AMC $\times$ MD	.00	.00	-.05		-.02	.02	-.06		

Note. Sites were dummy coded. Site 1 = Nashville. Site 2 = Durham. Site 3 = Seattle. Reference site = central Pennsylvania. Mat. = maternal. AMC = aggressive marital conflict. MD = marital disagreement. For maternal harsh punishment final model, $R^2 = .18$, $F(8, 333) = 9.34$, $p < .001$; for child aggressive-disruptive behavior teacher-report final model, $R^2 = .11$, $F(8, 305) = 4.49$, $p < .001$; for child aggressive-disruptive behavior maternal-report final model, $R^2 = .12$, $F(8, 345) = 5.96$, $p < .001$.

* $p < .10$.
 ** $p < .05$.
 *** $p < .01$.
 **** $p < .001$.