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When There Is Conflict

Interparental Conflict, Parent–Child Conflict, and Youth Problem Behaviors

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This study examined direct and indirect associations between overt and covert interparental conflict (IPC), parent–child conflict, and their links to youth problem behaviors. Data were collected from a sample of 641 school-age youth, ages 12 to 18 years, using a school-based survey. Analyses yielded direct positive linkages from overt IPC to antisocial behavior and from covert IPC to depression and antisocial behavior. When parent–child conflict was added to the model, significant direct associations were again observed between covert conflict and depression, with significant indirect effects through increased parent–child conflict. Likewise, significant direct associations were observed between overt conflict and antisocial behavior, with significant indirect effects through increased parent–child conflict. Although there was little variance in the findings when contextualized, youth ratings of religiosity were moderately and negatively associated with antisocial behavior. These findings document distinct pathways in the spillover of IPC to parent–child relations and youth well-being.

Keywords: *adolescent maladjustment; marital conflict; parent–child conflict; parenting; spillover*

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Conflict between parents—known as interparental conflict, or IPC—has a significant impact on adolescent adjustment (Buehler et al., 1997). A growing body of literature suggests that marital and couple conflict processes spill over into other family processes such as parenting and parent–child relationships and consequently have an impact on child well-being (Almeida, Wethington, & Chandler, 1999; Davies, Harold, Goeke-Morey, & Cummings, 2002). Contextual and social cognitive theorists have for a long time discussed the direct and indirect influences at work in family systems (e.g., Bertalanffy, 1968; Bowen, 1978; Minuchin, 1974). These theorized influences of interadult conflict on the well-being of children have largely been empirically confirmed. IPC has a direct, negative effect on child well-being (Booth, Crouter, & Clements, 2001; Buehler et al., 1997), and more recently, important mediators of the link between IPC and child well-being have emerged, such as child cognitions (Cummings, Goeke-Morey, Papp, & Dukewich, 2002) and parenting (Krishnakumar & Buehler, 2000). For example, evidence suggests that IPC predicts parent–child hostility (Harold, Fincham, Osborne, & Conger, 1997). However, parent–adolescent conflict in the context of IPC has been studied relatively less frequently. Given the direct associations between IPC and youth problem behaviors, further testing of indirect links such as parent–child interactions is particularly needed. The purpose of this study is to examine both the direct links between IPC and youth adjustment and the indirect links via parent–child conflict.

Theoretical Framework

Dominant theoretical explanations regarding the relationships between IPC and child well-being include family stress, social cognitive theory, and family systems theory. Drawing on these theories in a meta-analytic review of associations between marital relations and parent–child relations, Erel and Burman (1995) discussed three related hypotheses that have been common in the literature: (a) the spillover hypothesis, (b) the compensatory hypothesis, and (c) the compartmentalization hypothesis.

The spillover hypothesis predicts a positive link between IPC and parent–child relations via the transfer of mood from the marital relationship to parent–child relationships and to child functioning. Because negative interadult interactions are hypothesized to be associated with negative parent–child interactions and child adjustment, the spillover hypothesis predicts that positive parent–child relations are not easily achieved in the presence of marital discord. The systems notion of triangulation gives support to the dynamic of spillover. When children are triangulated into their caregivers' conflict, they

may be recruited as confidants, to side with one (or both) of the adults, or even to take on problem-solving roles directly (Fish, Belsky, & Youngblade, 1991). In such dynamics, children's needs are compromised in an attempt to stabilize an unstable family system (Bowen, 1978).

Similarly, family stress theory suggests that the stressors and ongoing strains of interadult conflict are likely to overwhelm a family system's capabilities (adaptive coping behaviors), resulting in an imbalance of family adjustment (Patterson & Garwick, 1994). Moreover, physiologic family stress theorists posit a biological type of spillover. The biobehavioral family model (Wood, Klebba, & Miller, 2000) links psychological and interactional processes with individual biological reactions and suggests that phenomena such as triangulation—the involvement of a child in parental conflict—are reflected biologically through the parasympathetic activity of the body. Wood and colleagues demonstrated a positive link between IPC, insecure father-child relatedness, and vagal activation (i.e., activation in the parasympathetic system), and Porter and colleagues (Porter, Wouden-Miller, Silva, & Porter, 2003) found that mild to moderate marital conflict was related to lower vagal tone in 6-month-old infants.

Social cognitive theory is also supportive of the spillover hypothesis. This theory posits that due to the interaction of behavior, environment, and individual cognitive factors, there will be a direct impact from couple conflict to children, as children learn how to behave and react from their parents (Bandura, 1977). For example, one study found that children who are repeatedly exposed to conflictual interactions between parents may respond in the same way (Loukas, Fitzgerald, Zucker, & von Eye, 2001). Individual cognition also influences child behavior. In their cognitive-contextual model, Grych and Fincham (1990) suggest that children respond to conflict with primary processing, in which children evaluate the degree to which conflict is threatening or benign, and with secondary processing, in which children discern the cause of the conflict, who is responsible for it, and whether they can successfully cope. The current study is a partial test of modeling in which the dynamics of parent-to-parent interactions may be replicated to some degree in parent-child interactions, all of which may have impact on child well-being. In this study, the spillover hypothesis would be validated by positive relationships between IPC, parent-child conflict, and youth problem behaviors.

In contrast, the compensatory hypothesis predicts a negative link between the marital relationship and parent-child relationships: When marital quality is poor, parents may satisfy their needs via the parent-child relationship. Conversely, when marital quality is high, a child may be seen

as a source of interference, which may create strain in the parent-child relationship (Erel & Burman, 1995). This hypothesis is supported by the family systems notion of cross-generational coalitions, where parents turn to their children for the emotional support and intimacy that is usually derived from the couple relationship. If a close parent-child relationship is fostered by the parents' negative relationship, questions arise regarding which aspects of the relationship are more versus less healthy for children (Cummings & Davies, 1994). One illustration typical of the unhealthy aspects of such relationship dynamics is parents' lack of provision of needed parental guidance and support (Jacobvitz & Bush, 1996). In a meta-analysis of the links between IPC and parenting, Krishnakumar and Buehler (2000) found a degree of support for the compensatory hypothesis with regard to mothers in particular. In some studies examined, the negative associations between IPC and parenting were stronger for fathers than for mothers, and mothers were less likely than fathers to withdraw emotionally in an atmosphere of conflict. In the current study, the spillover hypothesis would be partially validated by negative relationships between IPC and adolescent-parent conflict and fully validated by negative relationships between those variables and adolescent well-being.

Finally, the compartmentalization hypothesis predicts a nonsignificant relationship between IPC and child well-being and posits that parents will compartmentalize or contain their marital and parenting roles and thus keep their marital process from affecting their parenting and parent-child relationships. This hypothesis has received little empirical support and thus very little attention relative to the spillover and compensatory hypotheses.

Empirical evidence supporting the spillover of IPC to child well-being is growing (e.g., Buehler & Gerard, 2002; Cummings et al., 2002; Krishnakumar, Buehler, & Barber, 2003; Nicolotti, El-Sheikh, & Whitson, 2003). Meta-analytic reviews provide evidence largely in support of the spillover hypothesis and some slight support for the compensatory hypothesis. Erel and Burman (1995) examined 68 studies of the associations between marital relations and parent-child relations and found a moderate, positive effect size of .46. Buehler and colleagues (1997) conducted a meta-analysis of IPC and youth problem behaviors (68 studies, 348 effects sizes) and found an average effect size of .32, taking into account both significant and nonsignificant effects. Krishnakumar and Buehler (2000) examined 39 studies of the associations between IPC and parenting and also found a moderate association. The average weighted effect size was $-.62$ (i.e., IPC predicted negative parenting behaviors), again lending support to the spillover hypothesis. Moreover, Bradford and colleagues (2003) found relatively consistent evidence of the spillover of couple

conflict to parenting and to adolescent well-being among 9 samples from the Eastern hemisphere and among 2 from the Western hemisphere, suggesting that the spillover hypothesis may operate among non-Western families. Scholars now note the need to determine more specifically which types of conflict may be associated with which types of problems and which variables serve to mediate the associations between IPC and child adjustment (Davies et al., 2002).

IPC and Child Adjustment

IPC has been defined as disagreement between parents and is differentiated from mundane discord by the frequency, intensity, chronicity, content, degree of resolution, and mode of expression (Buehler, Krishnakumar, Anthony, Tittsworth, & Stone, 1994; Fincham & Osborne, 1993). The literature distinguishes at least five identified styles or modes of conflict: overt (including verbal and/or physical), covert, cooperative, avoidant, and withdrawn (Buehler et al., 1997; Cummings & Davies, 1994). Most studies have focused on hostile overt conflict, and some have also measured covert conflict (Bradford et al., 2003; Stone, Buehler, & Barber, 2002), cooperative (Cummings et al., 2002; Goeke-Morey, Cummings, Harold, & Shelton, 2003), and avoidant and withdrawn modes of conflict (Pryor, 2003).

This study examined overt and covert conflict. Overt conflict is defined as “hostile behaviors and affect that indicate indirect manifestations of negative connections between parents” (Buehler et al. 1998, p. 120) and is characterized by behaviors such as contempt, screaming, insulting, threatening, and hitting. A covert conflict style is defined as “hostile behaviors and affect that reflect passive-aggressive ways of managing conflict between parents” (p. 120). Buehler and colleagues describe covert conflict as comprising two components: triangulating children and global covert behaviors. Triangulation denotes active boundary violation by custodial adults in which children are scapegoated or pressured to side with one parent, thereby resulting in children either (a) aligning with one parent or the other or (b) aligning with neither but then withdrawing or feeling caught in the middle (Buchanan & Waizenhofer, 2001; see also Bradford & Barber, 2005; Montalvo, 1982). Global covert components include subtle indirect affect and behaviors that parents manifest, such as tension and resentment, that do not involve children (Buehler et al., 1998). Beyond the presence of negative affect between parents (e.g., Jenkins & Smith, 1991; Pryor, 2003), the component of triangulation in Buehler and colleagues’ (1998) measure of covert conflict employed in this study is prominent due to the focus on

child involvement in interadult conflict, such as parents' sending messages through children and children feeling caught in the middle of parental conflict. Parents' negativity surrounding IPC can threaten children's sense of security about their relationships with their parents (Cummings et al., 2002). This insecurity may increase involvement in conflict (Fishman, 1993) but may also lead to conflict avoidance (Afifi & Schrodt, 2003). In a diverse sample, Grych and colleagues found that triangulation mediated the relationship between IPC and both internalizing and externalizing problems (Grych, Raynor, & Fosco, 2004); thus, we hypothesized linkages between covert conflict and youth outcomes in this study.

The observation of some degree of conflict may actually benefit adolescents because it can promote the development of individuation and autonomy in the context of a warm relationship (Cummings & Davies, 1994; Cummings et al., 2002). Conflict between parents may teach adolescents ways to resolve conflict in an assertive manner without being dismissive or aggressive. High levels of conflict, however, may be emotionally overwhelming to children (Goeke-Morey et al., 2003), and to the extent that conflict is frequent, intense, and unresolved, children may be deprived of effective models of conflict resolution.

IPC, Parent–Child Conflict, and Youth Problem Behaviors

Fincham and colleagues asserted that marital and parent–child relationships are interwoven to the point that valid inferences cannot be drawn about the effects of IPC without simultaneously considering the parent–child relationship (Fincham, Grych, & Osborne, 1994). Increasingly, this body of research suggests that parent–child relations do in fact serve as indirect or mediating effects in the spillover of IPC to youth problem behaviors. The influence of IPC on parent–child interactions is multifaceted due to its impact on the emotions of both parents and children. Conflict and negative emotion in parents have been linked to child anger, sadness, and fear (Cummings et al., 2002). From a developmental perspective, parent–child conflict increases in early adolescence, compared to preadolescence, and typically remains high for a couple of years before declining in late adolescence (Laursen, Coy, & Collins, 1998; Paikoff & Brooks-Gunn, 1991; Smetana, 1989). A study of early adolescents' conflicts with parents and siblings reported a rate of two conflicts every 3 days, or 20 per month (Montemayor & Hanson, 1985). In early adolescence, the number of daily conflicts between parents and children increases, and at the same time there is a decrease in the amount of time they spend together and in their reports of emotional closeness (Larson & Richards, 1991).

Developmentally, adolescence brings biological and psychological changes that often lead to differences in beliefs and expectations regarding interpersonal issues between parent (or parents) and child (Collins, 1990); these discrepancies can lead to increased parent–adolescent conflict (Holmbeck, 1996). For many adolescents, the transition from childhood to adolescence includes minor but persistent conflict with parents over details of family life (Sagrestano, McCormick, Paikoff, & Holmbeck, 1999). Research using various methods indicates that conflict rarely occurs over topics such as religion, politics, sex, and drugs but rather over issues of noncompliance and the breaking of family rules set by parents (Smetana, 1989).

Between parents, frequent conflict can be emotionally draining and reduce their ability to recognize and respond to their children's emotional needs (Fincham et al., 1994). IPC is moderately associated with decreased warmth and support in parents, reduced behavioral control and monitoring and more verbal criticism and physical punishment (Krishnakumar & Buehler, 2000), impairments in parent–child relationships (Erel & Burman, 1995), and relatively higher parental psychological control and decreased parental monitoring (Stone et al., 2002).

Parent–Child Conflict as a Mediator

The link between IPC and child well-being is established in the literature to the point that second-generation research (Fincham, 1994) is now focused on clarifying the mediators and moderators of the primary link between IPC and child adjustment (Davies et al., 2002). Mediators common in the literature include parenting, parental depression, and youth cognition (Buehler et al., 1994). Specific to parent–child interactions, Buehler and Gerard (2002) found significant links between IPC and youth maladjustment and also found that harsh discipline and parent–child conflict fully mediated this association when added to the model. The coefficients did not differ by gender for adolescents or parents or by parents' ethnic background or poverty status. The link between IPC and parent–adolescent conflict was stronger for daughters, and it was stronger for European American families than for minority families. The current study sought to extend these findings by testing associations between Buehler's measures of overt and covert conflict (Buehler et al., 1998).

Moderating Influences

There are two common models that explain the moderating effect of gender in the link between IPC and child functioning (Davies & Lindsay,

2001). The first is the male vulnerability model, in which the link is stronger for boys than for girls due to the position that boys are at higher risk of the harmful effects of IPC. The second is the differential reactivity model, which hypothesizes that the stress children experience from IPC may be generally manifest in externalizing symptoms for boys, whereas it will be more commonly manifest for girls in terms of internalizing symptoms. There is a fair degree of support for the male vulnerability model, although the patterns are complex and somewhat inconsistent (Davies & Lindsay, 2001). Likewise, Reid and Crisafulli (1990) concluded in their meta-analysis that the association between IPC and youth maladjustment is stronger for boys than for girls. However, in Buehler and colleagues' (1997) meta-analysis, the observed association between IPC and youth problem behaviors was higher for boys than for girls, but the difference was not significant. Parent-child conflict occurs more often between adolescents and their mothers and between mothers and daughters in particular (Paikoff & Brooks-Gunn, 1991); thus, the mother-daughter relationship may be more strained during adolescence (Allison, 2000). Krishnakumar and Buehler (2000) also reported that the links between IPC and parenting are stronger for girls than for boys or mixed samples.

IPC is related to children's behavioral and emotional adjustment in both intact and divorced families (e.g., Buehler et al., 1997; Ehrensaft et al., 2003; Grych & Fincham, 1993). In their meta-analysis, Buehler and colleagues (1997) found that the effect size between IPC and youth problems was greater in middle-class samples than for samples with a wider range of family income and was stronger for samples with relatively lower levels of educational attainment. Effect sizes were greater using mothers' reports of IPC and youth outcomes, rather than fathers' reports, and when observational assessment of IPC is used as opposed to survey measures. There was no significant variability in effect size for the racial composition of samples (Buehler et al., 1997). Conversely, McLoyd, Harper, and Copeland (2001) reviewed literature that suggests that IPC may have a more pronounced impact on non-Hispanic White children, but the evidence is inconsistent. Ethnic minority children are more likely than non-Hispanic White children to be surrounded by extended family networks, and other ethnic- and race-related stressors may mute the unique effects of marital discord for these children.

This study examined the association of youth religiosity to youth problem behavior. Religiosity is multifaceted and includes public aspects such as attending meetings, private aspects such as prayer and meditation (Thomas & Carver, 1990), and self-perceived religiosity (Cochran & Akers, 1989). Recent work calls for the inclusion of contextual variables in the

study of conflict (Cordova, 2001), and evidence suggests that religiosity in childhood and adolescence might contribute to a degree of psychological advantage (Ward et al., in press). Conversely, aspects of religion may be associated with poorer adjustment (King, Speck, & Thomas, 1994) or be unrelated to adjustment (Hunsberger, Alisat, Pancer, & Pratt, 1996). Youniss argued that public religiosity is one potentially important venue in which adolescent identity forms and that joining with the identity of a religious group—especially those that provide youth venues for service—supports the individual formation of a healthy identity and allows youth to feel they are part of something transcendent (J. Youniss, personal communication, October 20, 2001; see also Erikson, 1963).

In study of Black U.S. Christian youth, religious attendance was a protective factor against antisocial behavior (Johnson, Jang, De Li, & Larson, 2000). Wills, Yaeger, and Sandy (2003) found that religiosity was inversely related to alcohol, tobacco, and marijuana use in youth. Latent growth analyses showed that religiosity reduced the impact of life stress on initial levels of substance use and also on the rate of growth in substance use over time. Another study found both religious activity and affiliation to be negatively associated with alcohol use (Michalak, Trocki, & Bond, 2007). Although there is little literature on the link between religion and depression, one study found a curvilinear relationship: Adults with strong beliefs and adults with no religious beliefs had lower levels of depression and anxiety, whereas those with low levels of belief who had a religious affiliation were higher in depression and anxiety (Ross, 1990). A more recent study reported similar findings (Eliassen, Taylor, & Lloyd, 2005), but the authors found that social support and socioeconomic status largely accounted for the finding.

Hypotheses

The goal of this study was to examine the associations between IPC, parent-child conflict, and youth problem behaviors to clarify discrete processes of the spillover hypothesis. Based on previous research, we predicted that the findings would be supportive of the spillover hypothesis in terms of direct, positive associations between overt IPC, covert IPC, and both youth depression and antisocial behavior, and indirect linkages between IPC, parent-child conflict, and youth problem behaviors. There is evidence that spillover occurs to some degree regardless of age and gender (Buehler et al., 1997; Buehler & Gerard, 2002) and, in some cases, family form and socioeconomic status (see also Gorman-Smith, Tolan, Zelli, & Huesmann, 1996; Hetherington, Bridges, & Insabella, 1998). However, given

the possibility of differential effects, as discussed above, we tested for differences in contextual variables such as sex, ethnicity, socioeconomic status, and religion.

Method

Sample

The data for this study were drawn from the National Institute of Mental Health–funded Ogden Youth and Family Project, a self-report survey study of adolescents and their parents. The sample was randomly selected from fifth- and eighth-grade classrooms in the Ogden City School District, with over-sampling for Hispanic American youth to represent the proportion of Hispanic children in the district (15%). (For more information about this project and associated data, see Barber, Stolz, Olsen, & Maughn, 2005.) The sample of data for this study consisted of 641 youths. Participants ranged in age from 12 to 18 years ($M = 15.1$, $SD = 1.57$, 9% missing data). Of the participants, 48% were boys, and 52% were girls. In terms of ethnic origin, 75% were European American, 13% were Hispanic American, and the remaining 12% represented a mix of other ethnic groups (6.4% missing data). In this study, the variable of race was coded as 0 = *minority* and 1 = *Caucasian*, due to the relatively small percentage of non-Caucasian ethnicities in the sample (approximately 25%). Regarding youth ratings, youth have the best knowledge of their own behavior problems compared to other family members (Stone et al., 2002), and prior work supports the validity of the use of youth ratings of parental conflict due to the salience of their subjective experiences of conflict (Cummings, Davies, & Simpson, 1994; Grych & Fincham, 1990).

We included in the analysis youth who lived with stepparents, single parents, and other family forms, as well as those living with their married biological parents, due to the evidence that a variety of adult relationship statuses have an impact on children (Cummings & Davies, 1994; Hetherington et al., 1998). Of the participants, 62.4% lived with both biological parents in the same household, 11.5% lived with mother only, 13.6% lived with mother and stepfather, 2.8% lived with father only, 4.4% lived with father and stepmother, 1.4% lived with both mother and father in separate homes, 1.2% lived with other relatives, 0.6% lived with a nonrelated guardian or foster parent, and 0.9% lived alone or with friends (1.2% missing data). Youth responses allowed them to subjectively rate conflict between either biological parents or stepparents, or parent figures. For the purposes of

these analyses, family structure was coded as 0 = *lives with single parent* (including stepparent or guardian) or 1 = *lives with both biological parents*. Reports from 60% of the youth indicated that the average level of parents' education was between "some college, trade, or vocational school" and "graduated from college with a bachelor's degree."

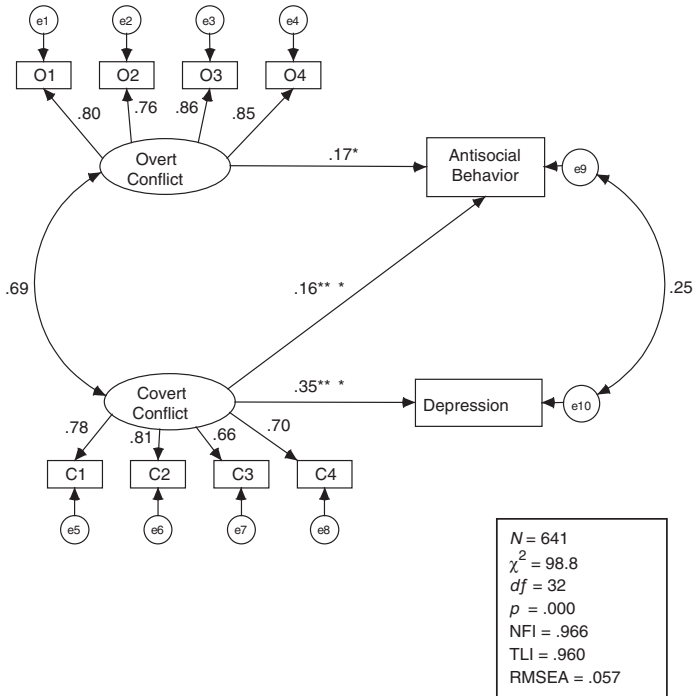
In terms of religious preference, 54% were Mormon, 15% Catholic, 4% Protestant, 0.4% Jewish, 10% "other," and 18% reported "no preference" (percentages rounded). The mean family income was roughly \$31,000 per year, with a standard deviation of \$5,000 (0.8% missing data). Based on reports from 69% of parents, 26.1% reported income between \$0 and \$24,000; 23.6% between \$25,000 and \$34,999; 27.9% between \$35,000 and \$49,999; and 21.6% reported income \$50,000 and over. In terms of youth perceptions of family financial status, 2.2% described their family financial status as a lot poorer than most, 11.1% a little poorer than most, 57.4% about the same amount of money as most, 23.1% a little richer than most, and 3.9% a lot richer than most (2.3% missing data).

Measures

IPC. Two dimensions of IPC—overt and covert—were measured using eight items from Buehler and colleagues' (1998) measures of IPC. Youths' perceptions of overt conflict were measured with four items on which they rate how often they see and hear conflict between their parents, such as "threaten each other" and "insult (show disrespect for) each other." The response format ranged from 1 (*never*) to 4 (*very often*). Thus, a higher score reflected higher IPC. The factor loadings for overt IPC ranged between .76 and .86 (see Figures 1 and 2); Cronbach's alpha was .89. Youths' perceptions of covert conflict were measured with four items on which they rate items such as "How often does one of your parents try to get you to side with one of them?" and "How often do you feel caught in the middle when your parents fight?" The responses ranged from 1 (*never*) to 4 (*very often*). The factor loadings for covert IPC ranged between .66 and .81; Cronbach's alpha was .83.

Parent-child conflict. To measure parent-child conflict, youth responded to four items regarding the frequency of open disagreements with their parents during the previous 6 months regarding topics such as school, helping out around the house, dress, and getting along with other family members. The response format ranged from 1 (*never*) to 6 (*almost every day*). A higher score reflected higher parent-child conflict. The factor loadings for parent-child conflict ranged between .50 and .70; Cronbach's alpha was .72.

Figure 1
Direct Model



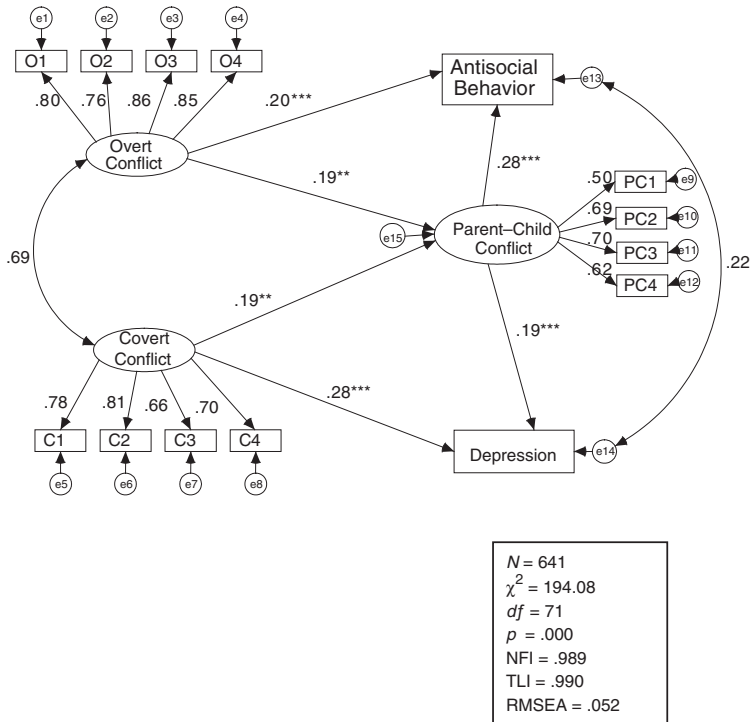
Note: All coefficients are standardized; e = error term; O = overt conflict; C = covert conflict; NFI = normed fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation.

* $p < .05$. *** $p < .001$.

Youth problem behaviors. Youth antisocial behaviors were assessed using six items from the Delinquent subscale of the Youth Self-Report form of the Child Behavior Checklist (Achenbach & Edelbrock, 1987). Example items include, "I hang around with kids who get in trouble," "I lie or cheat," "I cut classes or skip school," and "I use alcohol or drugs for non-medical purposes." The factor loadings for antisocial behavior ranged between .68 and .75; Cronbach's alpha was .80.

Depression. Youth depression was measured using the 10-item version of the Child Depression Inventory (Kovacs, 1992). Examples include, "I am sad once in a while," "I am sad many times," and "I am sad all the time"

Figure 2
Indirect Model



Note: All coefficients are standardized; e = error term; O = overt conflict; C = covert conflict; PC = parent-child conflict; NFI = normed fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation.

** $p < .01$. *** $p < .001$.

and “I do most things OK,” “I do many things OK,” and “I do everything wrong.” Frequency was reported for each item, with 1 (*never*) and 3 (*all the time*). The factor loadings for depression ranged between .42 and .74; Cronbach’s alpha was .83.

Religiosity. Religiosity was measured using items including both public and private indicators. Items include “attend religious services,” “read scriptures by self,” “pray privately,” “think seriously about religion,” and “talk about religion with friends” (1 = *never* and 3 = *all the time*). The factor loadings ranged between .81 and .87; Cronbach’s alpha was .88.

Analytic Procedures

The amount of missing data for this study was less than 2%, except as noted above. Missing data were imputed using the expectation maximization method in AMOS 5.0. This method imputes missing values by creating a covariance matrix with the existing data and then fitting expected values. This method is accepted as producing less bias in analyses than the use of case deletion or mean substitution (Acock, 1997).

Results

Bivariate Correlations

Bivariate correlations are reported in Table 1. All bivariate correlations between the family process variables were significant, generally moderate in strength, and in the hypothesized directions. Overt IPC was significantly associated with depression ($r = .25, p < .01$), antisocial behavior ($r = .26, p < .01$), and parent-child conflict ($r = .28, p < .01$). Covert IPC was also significantly associated with depression ($r = .32, p < .01$), antisocial behavior ($r = .26, p < .01$), and parent-child conflict ($r = .29, p < .01$). Parent-child conflict was significantly correlated with depression ($r = .28, p < .01$) and antisocial behavior ($r = .27, p < .01$). Furthermore, both antisocial behavior and depression were higher among youth who were non-White, among youth from nonmarried or remarried families, and among those with lower perceived financial status (see Table 1). Depression was higher among girls, and antisocial behavior was higher among older youth. These results justified multivariate testing.

Multivariate Analyses

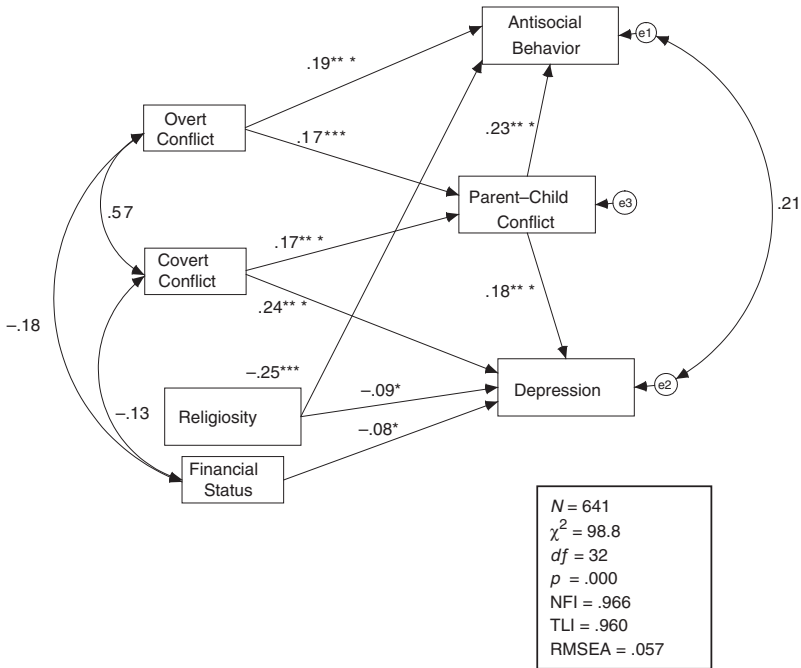
Structural equation modeling was used to conduct multivariate analyses. We used a model-trimming approach (Kline, 1998). Model testing was guided by the hypotheses, but model trimming was done on an empirical basis. Nonsignificant paths were deleted from each model, and model fit indices are reported for the trimmed models (see Figures 1-3). The first two models include overt and covert conflict and parent-child conflict as measurement models within the structural model (see Figures 1 and 2). We later eliminated the measurement models in conducting nested model comparisons. Bootstrap analyses were conducted to provide empirical information about the variability of parameter estimates regarding measurement models or the use of mean scores (Byrne, 2001); these analyses indicated very little

Table 1
Bivariate Correlations, Means, and Standard Deviations

Variable	1	2	3	4	5	6	7	8	9	10	11
1. Overt conflict	1										
2. Covert conflict	.56**	1									
3. Parent-child conflict	.28**	.29**	1								
4. Depression	.25**	.32**	.28**	1							
5. Antisocial behavior	.26**	.26**	.27**	.33**	1						
6. Age	-.01	.03	-.09*	.07	.09*	1					
7. Gender	-.14**	-.14**	.05	-.16**	-.06	-.11*	1				
8. Ethnicity	-.13**	-.17**	-.10*	-.15**	-.10**	.13**	.06**	1			
9. Family structure	-.16**	-.22**	-.07	-.18**	-.19**	.06	.08	.06	1		
10. Family finances	-.18**	-.11**	-.04	-.14**	-.10*	-.01	.05	.09**	.21**	1	
11. Religiosity	-.15**	-.14**	-.07	-.18	-.36**	.06	-.09*	.10*	.20**	.06	1
Mean	1.59	1.39	2.54	1.29	1.50	15.11				3.16	3.43
Standard deviation	0.70	0.60	1.12	0.32	0.46	1.57				0.75	1.78

Note: $N = 641$. Gender: 0 = female, 1 = male; ethnicity: 0 = Non-Caucasian, 1 = Caucasian; family structure: 0 = single parent, stepparent, guardian; 1 = both biological parents; family financial status: 1 = a lot poorer than most, 5 = a lot richer than most; religiosity, 1 = low, 5 = high.
 * $p < .05$. ** $p < .01$.

Figure 3
Full Contextualized Model



Note: All coefficients are standardized; NFI = normed fit index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation.

* $p < .05$. *** $p < .001$.

measurement error in the use of mean scores. In all analyses, we first tested each hypothesized model and then trimmed nonsignificant pathways, thus basing the test of each model on the one preceding. Standardized coefficients and fit indices are reported for each model. Table 2 presents a summary of all coefficients, both significant and nonsignificant. In the first model (direct model), we tested the direct effects between IPC and youth maladjustment. In the second (indirect model), we added parent-child conflict as an intervening variable between IPC and youth problem behavior. In the third model (full contextualized model) we also added youth religiosity, perceptions of family finances, and age as predictor variables, and we conducted nested model comparisons for boys and girls, non-White and White families, families living in versus out of poverty, Mormon and non-Mormon youth, and biological two-parent families compared to other family forms.

Table 2
Summary of Structural Pathway Coefficients

	Youth Outcomes		
	Parent–Child Conflict	Antisocial Behavior	Depression
Overt interparental conflict	– (.19**) .17***	[.17*] (.20***) .19***	<.05> – –
Covert interparental conflict	– (.19**) .17***	[.16***] <.09> –	[.35***] (.28***) .24***
Parent–child conflict	–	– (.28***) .23***	– (.19***) .18***
Religiosity	<–.03>	–.25***	–.09*
Financial status	<.01>	<–.03>	–.08*
†Gender	.10*	–.07	–.14***
†Ethnicity	–.06*	–.02	–.07
†Age	–.09*	.13***	.07
†Family structure	.00	–.07	–.06
†Family income	.01	.00	.05

Note: $N = 641$. Religiosity: 1 = *low*, 5 = *high*; financial status: 1 = *a lot poorer than most*, 5 = *a lot richer than most*; gender: 0 = *female*, 1 = *male*; ethnicity: 0 = *Non-Caucasian*, 1 = *Caucasian*; family structure: 0 = *single parent, stepparent, guardian*; 1 = *both biological parents*. Brackets indicate direct model coefficients; parentheses indicate indirect model coefficients; angle brackets indicate trimmed coefficients; a dagger indicates the full contextualized model coefficients when tested as predictor variables.

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

Direct model. We first tested the direct relationships between the two IPC variables (overt and covert conflict) and the two youth problem behavior variables (antisocial behavior and depression; see Figure 1). There was a significant positive relationship between overt conflict and youth antisocial behavior ($\beta = .17, p < .05$); overt IPC was not significantly related to youth depression ($\beta = .05, p = .44$). Covert conflict was related to both depression ($\beta = .35, p < .001$) and antisocial behavior ($\beta = .16, p < .001$). The predictor variables explained 22.6% of the variance in youth problem behaviors. The model fit was adequate (see Figure 1 for fit indices).

Full model. Having established direct links between IPC and youth problem behavior, the next step was to add parent–child conflict to the

model to test for possible indirect effects. This model tested the direct associations of overt and covert conflict with youth problem behaviors and the indirect effects of both forms of conflict through parent-child conflict with youth depression and antisocial behavior (see Figure 2). The fit for this model was adequate (see Figure 2 for fit indices). In this model, the predictor variables explained 25.8% of the variance in youth problem behaviors. In the presence of parent-child conflict, overt conflict was linked to youth antisocial behavior both directly ($\beta = .20, p < .001$) and indirectly via parent-child conflict ($\beta = .19, p < .01$), and parent-child conflict was linked to antisocial behavior ($\beta = .28, p < .001$). Parent-child conflict thus partially mediated the link between overt conflict and youth antisocial behavior. Similarly, covert conflict was still linked directly to youth depression ($\beta = .28, p < .001$) and indirectly to depression, via parent-child conflict ($\beta = .19, p < .01$), and parent-child conflict was linked to youth depression ($\beta = .19, p < .001$). With the addition of parent-child conflict to the model, the association between covert conflict and youth antisocial behavior became insignificant. Thus, the previously observed link between covert conflict and youth antisocial behavior was fully mediated by parent-child conflict (Kline, 1998).

Full contextualized model. To test contextual variables, we again tested the full model but included the continuous variables of youth reports of religiosity, youth age, and family financial status (i.e., subjective youth ratings of family financial well-being) as predictor variables of the model's three family process variables. Again, the fit was good (see Figure 3). This model explained a total of 31.4% of the variance in youth problem behaviors. This analysis yielded a moderate, negative association between youth ratings of religiosity and antisocial behavior ($\beta = -.25, p < .001$) and a low, negative association between religiosity and youth depression ($\beta = -.09, p < .05$). Age was not significantly related to any variable. There was a low association between youth perceptions of family financial status and youth depression ($\beta = -.08, p < .05$). Due to the complexity of the model (i.e., four or more variables), the indirect effects may be taken as significant if all the component path coefficients are significant (Kline, 1998); this is the case in both full models.

The other associations between IPC and the other family process variables were of similar strength, as previously observed in the full model: Overt conflict was associated with youth antisocial behavior both directly ($\beta = .19, p < .001$) and indirectly through parent-child conflict ($\beta = .17$ and $\beta = .23, p < .001$). Covert conflict was associated with youth depression both directly ($\beta = .24, p < .001$) and indirectly ($\beta = .17$ and $\beta = .18, p < .001$). The direct associations between youth adjustment were again partially

mediated by the associations between both styles of couple conflict and parent-child conflict.

The bivariate correlations had indicated the potential for the moderating effects of gender, ethnicity, age, family structure, and family income. We tested for these in the third model first by including them as predictor variables and second by conducting nested model comparisons. The results varied somewhat by analytic method. When tested as predictor variables, boys were mildly higher in parent-child conflict ($\beta = .10, p < .05$), as were non-Caucasian youth ($\beta = -.06, p < .05$) and younger teens ($\beta = .09, p < .05$). Girls were higher in depression ($\beta = .14, p < .001$), and older teens were higher in antisocial behavior ($\beta = .14, p < .001$). In contrast, however, nested model tests yielded no significant differences according to gender, ethnicity, or age (grouped 12 to 14 years and 15 to 18 years). In addition, the model fit equally well for Mormon and non-Mormon youth, for families living in poverty versus those living above the poverty line at the time the data were collected, and for two-parent families compared to other family forms.

Discussion

The purpose of this study was to conduct a test of the spillover of IPC into parent-child conflict interactions and youth adjustment, with the hypothesis that parent-child conflict would constitute an indirect pathway in the relationship between IPC and youth adjustment. To test this hypothesis, we examined the associations among youth perceptions of IPC, parent-child conflict, and youth problem behavior. The results clarify pathways of the spillover of couple conflict into family process. The findings substantiated distinctions between overt versus covert styles of IPC and the existence of specialized effects on youth adjustment when these different styles of conflict are measured and analyzed. In addition, the results shed a degree of light on conflict in the parent-child relationship as an indirect influence on the impact of conflict on youth maladjustment.

Direct effects. The current findings of direct relationships between couple conflict and youth maladjustment are consistent with past literature (e.g., Amato & Keith, 1991; Bradford et al., 2003; Fincham et al., 1994; Krishnakumar et al., 2003) and further clarify the links between IPC and youth adjustment. In these data, overt conflict was associated with externalizing behaviors, with no relationship to depression. This direct association supports the notion that youth who observe IPC are likely to imitate their parents' maladaptive and aggressive behavior and be at risk for

antisocial behavior. Relative to IPC, it has been suggested that children's modeling of their parents' hostile conflict is the mediator most likely to lead to children's externalizing behaviors (Grych & Fincham, 1990). The current findings support that hypothesis. If it is true that children develop cognitive models of interpersonal relationships by learning from and imitating the behaviors of their parents (Bandura, 1977), we might indeed expect to see associations between overt IPC in parents' behavior (i.e., showing disrespect, insulting, yelling) and externalizing behavior among youth (swearing, lying, hanging around kids who get in trouble). If overt tactics of conflict are acceptable, youth may become aggressive with their peers or younger siblings (Cummings & Davies, 1994) or, as suggested by these findings, with their own parents.

Likewise, youth who rated their parents higher in covert IPC were relatively more likely to exhibit depression and antisocial behavior. The direct association between parents' use of covert conflict and youth depression remained, even in later analyses in the presence of parent-child conflict. It should be noted that covert conflict was conceptualized and measured in terms of parental triangulation (frequency of parents sending messages through children or of youth feeling caught in the middle). Like overt conflict, covert conflict is witnessed by youth. By definition, however, covert conflict also actively involves children, thus presenting the threat of boundary intrusion due to pressure to participate in conflict and to align with one parent (Bradford & Barber, 2005). This phenomenon may help explain the relatively stronger direct impact of covert IPC on depression compared to the direct impact of overt conflict on antisocial behavior. This finding is also consonant with evidence that suggests that emotional tension and covert conflict is linked to high levels of self-blame and general emotional distress in children (Pryor, 2003) and thus may be relatively more harmful to children than overt conflict.

Indirect effects. These results document parent-child conflict as a consistent and significant partial mediator of the link between overt IPC and antisocial behavior (externalizing) and between covert IPC and depression (internalizing). One explanation for this finding is that couple conflict can be emotionally draining to parents and impair their ability to be appropriately responsive to their children's emotional needs (Fincham et al., 1994), thus increasing the likelihood of conflict with their children. From the child's standpoint, exposure to conflict has been shown experimentally to increase the likelihood of distress and conflict in children's interactions with others (Cummings, 1994); it is clear from these findings that IPC increases the likelihood of both parents and children engaging in conflict with each other.

The effects of parent–child conflict on youth antisocial behavior and on youth depression indicate that these pathways of family process operate simultaneously in the presence of the directly deleterious effects of IPC on youth, discussed earlier. When parent–child conflict was added to the model, the direct associations between overt IPC and externalizing behavior (antisocial) and between covert IPC and internalizing behavior (depression) remained. The path coefficients suggest that the impact of IPC on youth behaviors may flow in part from parent–child conflict, which increases in the presence of parental triangulation and parents' overt conflict. Parents' conscription of children in covert conflict may thus play out as adolescents' pushing back at their parents and/or in adolescents' mimicking parental process in parent–youth interactions. Youth may see the ways in which their parents deal with conflict in their relationship, which in turn may provide them interpersonal templates that fit with antisocial behavior. These results may suggest that even though disagreements in parent–child relations may be emotionally upsetting to youth, the tactics that youth observe in IPC might be brought closer and potentially applied to them personally during the process of parent–child conflict. These processes may translate outwardly into antisocial behavior in other venues and inwardly into youth depression.

Contextual variables. In the contextualized model, youth who rated themselves higher in religiosity were moderately less likely to engage in antisocial behavior and very slightly less likely to be depressed. Both findings should be replicated, especially the latter because of the markedly weak association. The negative link between religiosity and antisocial behavior is consonant with other evidence suggesting that religiosity is protective (e.g., Alcorta, 2006). Because the majority of the youth in this sample were Mormon, we conducted a nested model comparison but found no significant difference between the models. This finding points to a youth's religious affiliation as an insignificant variable in this regard.

The differences we found regarding contextual variables varied by analytic method. When tested as predictors, parent–child conflict was slightly higher among boys, non-Caucasian youth, and younger teens. Antisocial behavior was higher in boys, and depression was higher in girls. Using nested model comparisons, however, we found no significant difference in model fit according to gender, ethnicity, age, family structure, and poor and nonpoor. The lack of differences among models should be interpreted with caution due to the predominance of middle-class youth in this sample and the limited ethnic diversity. Still, some absence of differences is not surprising given past findings. In a meta-analysis of 68 studies, Buehler and

colleagues (1997) concluded that the impact of IPC on youth adjustment is similar for youth regardless of gender and age. On the other hand, Buehler et al. did find variation in effect sizes associated with socioeconomic status and the average time since separation. Other studies suggest that general patterns may hold across culture and ethnicity (e.g., Bradford et al., 2003); however, some differences in the spillover phenomenon may exist relative to ethnicity in other indirect process variables such as parenting (e.g., Krishnakumar et al., 2003). Thus, more study of nonmajority-cultured families is warranted. In addition, the demographic area of this study warrants caution in the generalizability of these findings in that more than half of the youth in the sample were Mormon. Lastly, this study's correlational design does not allow causal interpretations.

Conclusion

These findings shed a degree of light on family conflict and youth well-being both with regard to direct explanations (e.g., social learning) and indirect explanations (e.g., systems theory). More specifically, the results help to clarify both the specialized and indirect effects in the spillover of IPC into child well-being, particularly in its documentation of the simultaneous effects of both covert and overt conflict. The path coefficients between overt IPC and externalizing behaviors and between covert IPC and internalizing behaviors suggest that IPC and conflict between parents and children coexist and that their effects may be additive. Beyond family process, the significance of personal religiosity in the lives of the youth in this sample demonstrates the operation of a contextual variable in the lives of adolescents. Finally, with regard to intervention, the results affirm the importance of tending to parent-child communication and relations in the process of ameliorating couple interactions.

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