

# Marital Conflict and Preadolescent Behavioral Competence: Maternal Knowledge as a Longitudinal Mediator

Amber M. Grundy, Dawn M. Gondoli, and Elizabeth H. Blodgett Salafia  
University of Notre Dame

The present study considered whether maternal knowledge mediated the relation between overt marital conflict and preadolescent behavioral competence. Four years of self-report data were collected from 133 mothers and their preadolescents, beginning when the preadolescents were in 4th grade. Marital conflict, maternal knowledge, and preadolescent behavioral competence were assessed at all 4 time points in order to apply a stringent methodology for assessing longitudinal mediating patterns. The results indicated that maternal knowledge mediated the relation between marital conflict and preadolescent behavioral competence. Thus, the present study identified one possible process through which marital conflict may affect preadolescent behavior.

*Keywords:* maternal knowledge, longitudinal mediation, marital conflict, preadolescent behavioral competence, monitoring

Marital conflict has been consistently associated with adjustment problems among children and adolescents (Davies & Cummings, 1994; Grych, 2002; Krishnakumar & Buehler, 2000). Process-oriented models have been developed to account for the association between conflict and children's adjustment, with disrupted parenting hypothesized as an important mediating mechanism (Grych, 2002; Krishnakumar & Buehler, 2000). In the empirical literature, affective- and control-related aspects of parenting (e.g., warmth-acceptance, firm vs. lax control, and inconsistent discipline) have been found to at least partially mediate connections between marital conflict and internalizing and externalizing symptoms among children and adolescents (Buehler, Benson, & Gerard, 2006; Fauber, Forehand, Thomas, & Wierson, 1990; Gonzales, Pitts, Hill, & Roosa, 2000).

Conceptual papers have clearly delineated how and why compromised parenting may mediate the connection between marital conflict and decreased child adjustment (e.g., Davies & Cummings, 1994; Grych, 2002); however, the

extant empirical literature is only suggestive of mediating relations (for further discussion, see Buehler et al., 2006). Although authors have been ambitious in constructing complex models with multiple dimensions of parenting as mediators, the designs and analytic techniques employed have been less sophisticated (e.g., path analysis of contemporaneous associations). If the major aim of a study is to test mediation, it may be better to construct a simpler model that presents the strongest possible test of mediating processes over time (Cole & Maxwell, 2003). In addition, it is important to consider the effects of marital conflict on variation in children's well-being. Most of the relevant literature has focused on the effects of marital conflict on children's internalizing and externalizing symptoms. Park (2004) noted that researchers cannot assume that individuals are doing well just because they do not exhibit elevated symptoms. Furthermore, there can be meaningful variation in well-being even in the absence of pathology (Cummings, Davies, & Campbell, 2000; Sroufe & Rutter, 1984). Therefore, further attention to variation in well-being in the normative range is warranted.

In the present study, we attempted to address issues related to mediation and to well-being as an outcome by examining the link between exposure to hostile marital conflict and preadolescents' behavioral competence. We examined this relation longitudinally, as the preadolescents completed fourth through seventh grades. We hypothesized that there would be negative relations between prior marital conflict and subsequent preadolescent behavioral competence. Furthermore, we expected that these relations would be indirect and in fact mediated by a parenting-relevant variable: mothers' knowledge of their preadolescent's whereabouts, behaviors, and acquaintances. We hypothesized that, as part of this mediated effects pattern, marital conflict would have a negative effect on maternal knowl-

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Amber M. Grundy, Dawn M. Gondoli, and Elizabeth H. Blodgett Salafia, Department of Psychology, University of Notre Dame.

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Correspondence concerning this article should be addressed to Dawn M. Gondoli, 118 Haggard Hall, Department of Psychology, University of Notre Dame, Notre Dame, IN 46556. E-mail: dgondoli@nd.edu

edge and that maternal knowledge would have a positive effect on preadolescent behavioral competence. To provide support for the indirect pathways in our model, we next reviewed separate conceptual and empirical papers that have linked marital conflict to knowledge and knowledge to behavioral competence.

In the present study, *knowledge* refers to parental awareness of the preadolescent's whereabouts, behaviors, and acquaintances. Historically, this construct has been called parental "monitoring." However, widely used monitoring measures also appear to assess what parents know about their children rather than merely assess parenting behaviors (Crouter & Head, 2002). Thus, such monitoring measures have recently been renamed measures of parental "monitoring-relevant knowledge" (Laird, Pettit, Bates, & Dodge, 2003), "monitoring knowledge" (Buehler et al., 2006), or simply "knowledge" (Stattin & Kerr, 2000), and we follow this revised conceptualization in our article.

We hypothesize that parental knowledge will mediate the effect of marital conflict on preadolescents' adjustment. Research has indicated that knowledge is facilitated when children and adolescents freely disclose information to parents and when family interactions are generally harmonious (Crouter & Head, 2002). Marital conflict, and in particular, overtly hostile marital conflict in the presence of preadolescents, is likely to present individual and family conditions that impede parental knowledge. Such conflict may cause parents to become emotionally unavailable to their preadolescents, may lead to decreased communication between parents, or may cause preadolescents to view their parents as less accessible or interested (Easterbrooks & Emde, 1988; Fincham, 1994; Grych, 2002). Thus, it is reasonable to hypothesize that preadolescents' exposure to hostile marital conflict would be negatively associated with knowledge. A recent cross-sectional study indicated that the associations between interparental hostility and sixth graders' internalizing and externalizing problems were partially mediated by knowledge (Buehler et al., 2006). Analyses revealed that interparental hostility was negatively associated with knowledge, and knowledge was negatively associated with adolescents' internalizing and externalizing symptoms. These cross-sectional findings are consistent with our hypothesized model and provide a basis for longitudinal research that addresses time-ordered linkages.

In turn, an extensive literature has indicated that knowledge is associated with children's behavior. A number of cross-sectional studies have found that low knowledge is associated with behavioral problems among youth (e.g., Barnes & Farrell, 1992; Brown, Mounts, Lamborn, & Steinberg, 1993; Stattin & Kerr, 2000), suggesting that low knowledge may lead to behavior problems, whereas high knowledge may prevent behavior problems. In addition, an emerging literature has suggested that knowledge and behavioral problems are reciprocally connected over time. For instance, Laird and colleagues (2003) found reciprocal connections between parental knowledge and delinquency among children in the 9th to 12th grades. More specifically, knowledge was associated with decreases in delinquency,

and delinquency was associated with decreases in knowledge (Laird et al., 2003).

Virtually no studies have examined how parental knowledge may account for variation in child and adolescent behavioral competence, however. This is an important gap in the literature, as many children may not exhibit meaningful variation in serious behavior problems yet may exhibit meaningful variation in behavioral competence. Furthermore, variation in this form of well-being may be as important to consider as variation in externalizing problems (Park, 2004). In one exception to the typical foci on adjustment problems, Crouter, MacDermid, McHale, and Perry-Jenkins (1990) examined associations between parental knowledge and several domains of preadolescent competence. Most relevant to the present study, higher parental knowledge was associated with higher scores on the Behavioral Conduct subscale of the Self-Perception Profile for Children (Harter, 1985). These findings indicated that more knowledgeable parents had children who behaved well, did not get into trouble, and generally felt more positive about their own conduct (Crouter et al., 1990). This cross-sectional study presented an interesting pattern of relations, which should be examined longitudinally.

In our hypothesized model, we proposed that, over time, marital conflict would be negatively associated with knowledge, whereas knowledge would be positively associated with behavioral competence. Because children's behaviors and compromised parenting may predict marital conflict (Fincham, 1994), we also examined whether prior behavioral competence and knowledge accounted for change in marital conflict. That is, we tested the reverse of the hypothesized model. Because reciprocal connections between knowledge and behavioral adjustment have been reported (Laird et al., 2003), we included reciprocal paths between knowledge and behavioral competence in all models.

Following guidelines developed by Cole and Maxwell (2003), we tested longitudinal mediation with all variables measured at all time points. This allowed us to include all relevant autoregressive paths. If one applies typical cross-sectional mediation procedures to longitudinal data without controlling for prior levels of all the model variables, one is assuming that prior levels of the variables are unrelated to subsequent levels of the variables, which is a very unlikely proposition for most developmental and family relations data. As described by Cole and Maxwell, a longitudinal mediation model that does not include all relevant autoregressive paths will almost certainly yield biased estimates for the direct and indirect paths that are included. In our analyses, we substantially reduced this bias by including all variables at all time points in our models.

## Method

### *Participants and Procedure*

The data for the present study were collected as part of a longitudinal project examining parenting and child outcomes during the transition to adolescence. During the 1st year of the study, initial contact letters were distributed by

primary schools in a medium-sized city in the U.S. Midwest. The letters briefly described the study and instructed mothers of fourth graders to contact the research office if interested in participating.

To ensure that families had the same degree of experience with the adolescent transition, mother–preadolescent dyads were eligible if the fourth grader was the oldest child in the family. Our aim was not to compare families in different marital contexts, nor did we intend to examine phases of adjustment following marital transition. Therefore, we focused on dyads in which mothers remained married during the study period. Eligibility was determined by screening questions administered over the phone by research assistants. Five hundred thirty-seven mother–preadolescent/adolescent dyads contacted the research office. Of the 537 who contacted the study, 182 met the criteria, whereas 355 did not because they had an older child or because the mother was divorced or remarried. One hundred sixty-five (91%) of the eligible dyads completed the study at Year 1; 13 dyads (7%) refused to participate after hearing more about the study, and 4 dyads (2%) dropped out after repeatedly canceling their laboratory appointment.

Due to attrition over the course of the 4-year study (e.g., relocation or refusal to continue participation), a final total of 133 dyads' data was available for analysis in the present study. Seven of the original 165 dyads were lost to attrition. In addition, data were excluded from the present analyses for 13 dyads that continued in the study but for which the mother experienced a change in marital status during Years 2–4 (all became divorced or separated). Data were also excluded for 10 cases in which mother data only were obtained for 1 or more years of data collection. These 10 mother-only cases were completed by mail and were the result of family relocation or preadolescent refusal to continue. Because of a concern that the preadolescents would not be able to complete their surveys properly without assistance, we chose not to have the relocated preadolescents complete their surveys by mail. Finally, data were excluded for 2 dyads that had missing data on one or more variables used for the present study.

Once annually, the dyads visited a university research laboratory for approximately 2 hr. During each visit, mothers and preadolescents separately and independently completed self-report questionnaires. In accord with the university's Institutional Review Board, participants completed consent and assent forms prior to completing their questionnaires. As compensation for their participation, dyads were paid \$30 for the 1st year of the study, \$40 for the 2nd year, \$50 for the 3rd year, and \$60 for the 4th year.

The proposed analyses for the current study were based on the 133 dyads that had complete data for all 4 years of the study. This sample consisted of 60 boys and 73 girls who were between the ages of 9 and 11 years at the fourth-grade assessment ( $M = 9.69$ ,  $SD = 0.51$ ). The age range of the mothers was 28 to 51 years, with an average age of 37.76 years ( $SD = 4.02$ ). Most of the sample identified themselves as European American (95.5%). The mothers had been married an average of 13.5 years ( $SD = 3.86$ ). There was an average of 2.49 children in the families.

The families tended to be well educated and middle class: The mothers had completed, on average, 3.4 years of education after receiving their high school diplomas; 69.2% of the mothers worked full- or part-time jobs outside the home; and the families' annual household incomes ranged from \$5,400 to \$400,000, with a mean annual income of \$80,912 ( $SD = \$53,111$ ,  $Mdn = \$69,000$ ). According to *t*-test, analysis of variance, or chi-square procedures, the 133 dyads included in the present analyses did not differ significantly on any of the demographic variables from the dyads that were excluded ( $ps > .05$ ). Comparisons of the dyads on Time 1 (T1) model variables revealed that the excluded dyads had higher scores on marital conflict and lower scores on behavioral competence and knowledge than did the included dyads ( $ps < .05$ ).

### Measures

**Marital conflict.** Marital conflict was assessed at all 4 years of the study with mother reports on the O'Leary-Porter Scale (Porter & O'Leary, 1980). The O'Leary-Porter Scale is a widely used 10-item scale that assesses children's exposure to hostile interparental conflict. Mothers indicated how often conflict with their husbands occurred in front of their preadolescents using a Likert-type scale ranging from 1 (*never*) to 5 (*very often*) for 9 of the 10 items. A sample item included, "How often do you or your husband display verbal hostility in front of your child?" The 10th item asked mothers to report the percentage of arguments with her husband that takes place in front of the preadolescents on a 5-point scale ranging from *less than 10%* to *more than 75%*. All items were scaled so that higher scores indicated greater conflict in front of the preadolescent. Across the 4 years of data collection, alpha values ranged from .85 to .88.

**Maternal knowledge.** Maternal knowledge at all time points was measured with a nine-item scale that assessed the degree to which a mother was knowledgeable about her preadolescent's whereabouts, acquaintances, and behaviors. Preadolescent and mother perceptions of maternal knowledge were measured with parallel items. The knowledge scale used in the present study is the same scale that has been widely used to assess parental monitoring in prior studies (e.g., Brown et al., 1993; Fauber et al., 1990; Stattin & Kerr, 2000), a construct now referred to as *knowledge* when such items are administered. Sample items included, "How often does your mom know where you go when you are not at home?" and, "How often do you know who your child's friends are?" Mothers and preadolescents responded to each item using a 5-point Likert-type scale ranging from *never* to *always*. Items were scored such that higher scores indicated greater knowledge. Across the 4 years of data collection, alpha values ranged from .68 to .79 for mother reports and .78 to .82 for preadolescent reports.

**Preadolescent behavioral competence.** Preadolescent behavioral competence was measured with the Behavioral Conduct subscale of the Self-Perception Profile for Children (Harter, 1985). This subscale assesses the degree to which one likes the way one behaves, does the right thing, acts the way one is supposed to, and avoids getting into trouble.



Versions of the Self-Perception Profile for Children have been developed to assess self-perceptions and parent perceptions of child and adolescent competence in various domains, including behavioral competence (Cole, Martin, Powers, & Truglio, 1996). In the present study, preadolescents and mothers both rated behavioral competence. The preadolescent version of the subscale consisted of six items, and the mother version consisted of three items (Cole et al., 1996; Harter, 1985). Harter (1985) reported that the Behavioral Conduct subscale exhibited acceptable reliability and external validity among children and parents. Furthermore, Cole and White (1993) found that among fourth graders, child-reported behavioral competence was positively associated with peer ratings of appropriate conduct. Child-reported behavioral competence has also been negatively correlated with parent-reported child externalizing problems (Cederblad, Pruksachatkunakorn, Boripunkul, Intraprasert, & Hook, 2001).

Responding to each item was a two-step process. First, respondents indicated whether the preadolescent was more similar to some preadolescents who were behaviorally competent or more similar to others who were not (e.g., "Some kids behave themselves very well but other kids often find it hard to behave themselves"). Respondents then indicated whether the statement they had chosen was "really like me (my child)" or, "sort of like me (my child)." Items were scored on a 4-point rating scale such that higher scores indicated greater behavioral competence. Across the 4 years of data collection, alpha values ranged from .69 to .76 for mother reports and .83 to .86 for preadolescent reports.

## Results

### *Plan of Model Testing*

The structural equation modeling program EQS 6.1 was used to estimate relations among the variables, assess model fit, and compare models. Models that provided a good fit to the data had nonsignificant ( $p > .05$ ) chi-square values, comparative fit indices (CFIs) greater than .95, and root-mean-square errors of approximation (RMSEAs) less than .06. Following the guidelines for testing longitudinal mediation set forth by Cole and Maxwell (2003), we measured all variables at all time points and tested a direct, full, and mediation model in sequence for the hypothesized and alternative models (see also Baron & Kenny, 1986). Descriptive statistics and correlations for the variables are reported in Table 1.

### *Analyses Utilizing Mother Reports of Marital Conflict and Preadolescent Reports of Knowledge and Behavioral Competence*

The hypothesized model proposed that the relation between marital conflict and preadolescent behavioral competence would be mediated by maternal knowledge. To begin, we tested the direct relations between marital conflict and subsequent preadolescent behavioral competence, while including all autoregressive paths for all variables. The direct

effects model fit well,  $\chi^2(10) = 10.424$ ,  $p = .404$ ; CFI = .999, RMSEA = .018. Inspection of the standardized path coefficients indicated that the relation between marital conflict at T1 and change in behavioral competence at T3 approached statistical significance,  $\gamma = -.131$ ,  $p < .10$ . The relation between marital conflict at T2 and change in behavioral competence at T4 was not statistically significant,  $\gamma = -.068$ ,  $p > .05$ . The negative coefficients suggested that higher levels of prior marital conflict predicted decreases in preadolescent behavioral competence. Although the direct relation between T1 marital conflict and change in behavioral competence at T3 only approached significance, we proceeded with subsequent tests of our hypothesized model. We decided these additional tests were appropriate, given the difficulty of obtaining significant relations across respondents in family research, particularly for somewhat small samples (e.g., Gonzales et al., 2000). We also note that our tests of the longitudinal direct effects were particularly stringent, given the inclusion of the autoregressive paths in the model.

We next examined a full model, which included marital conflict, knowledge, and behavioral competence measured at all time points. This model included direct and indirect paths, autoregressive paths, and reciprocal paths between knowledge and behavioral competence. The model fit well,  $\chi^2(25) = 28.812$ ,  $p = .272$ ; CFI = .996, RMSEA = .034, and the direct relation between marital conflict at T1 and behavioral competence at T3 was reduced from  $\gamma = -.131$  to  $\gamma = -.086$ , which was no longer significant. The direct relation between marital conflict at T2 and behavioral competence at T4 was also reduced (from  $\gamma = -.068$  to  $\gamma = -.051$ ). Furthermore, the proposed indirect paths in the model were generally significant and headed in the expected directions. Given these results, we proceeded with exploration of the complete mediation model.

The complete mediation model had a good fit to the data,  $\chi^2(27) = 30.809$ ,  $p = .279$ ; CFI = .996, RMSEA = .033. As shown in Figure 1, the indirect paths between marital conflict, knowledge, and behavioral competence were in the expected directions and were generally statistically significant. These relations were particularly robust from T1 to T3 and suggested that marital conflict led to knowledge, which in turn led to behavioral competence.

### *Analyses Utilizing Mother Reports of Marital Conflict, Knowledge, and Behavioral Competence*

Next we examined our hypothesized model again, this time using mother reports for all variables. Results indicated that marital conflict and behavioral competence were not directly associated between T1 and T3 ( $\gamma = -.046$ ) or between T2 and T4 ( $\gamma = -.058$ ). The direct effects model had a poor to fair fit,  $\chi^2(10) = 28.949$ ,  $p = .001$ ; CFI = .978, RMSEA = .120. Because no direct effects between prior marital conflict and subsequent behavioral competence even approached significance, however, we did not proceed to examine full or mediation models.

Table 1  
Descriptive Statistics and Intercorrelations for Study Variables for Mother and Preadolescent Reports (N = 133)

Variable	M (SD)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
<b>Mother-reported variables</b>																					
1. Marital conflict T1	20.05 (5.62)	—																			
2. Marital conflict T2	20.31 (5.90)	.88*	—																		
3. Marital conflict T3	20.38 (5.64)	.84*	.87*	—																	
4. Marital conflict T4	20.69 (5.71)	.82*	.82*	.85*	—																
5. Knowledge T1	33.70 (2.21)	-.23*	-.19*	-.17*	-.17*	—															
6. Knowledge T2	33.71 (2.06)	-.12	-.06	-.07	-.04	.60*	—														
7. Knowledge T3	33.29 (2.59)	-.18*	-.10	-.10	-.12	.59*	.62*	—													
8. Knowledge T4	32.38 (2.97)	-.24*	-.23*	-.23*	.24*	.56*	.53*	.66*	—												
9. Competence T1	11.08 (1.42)	-.38*	-.46*	-.31*	-.34*	.01	.10	.01	.03	—											
10. Competence T2	10.95 (1.45)	-.40*	-.47*	-.33*	-.34*	.09	.15	.11	.13	.72*	—										
11. Competence T3	11.23 (1.18)	-.30*	-.34*	-.29*	-.32*	.14	.31	.14	.21*	.55*	.58*	—									
12. Competence T4	11.20 (1.27)	-.37*	-.38*	-.27*	-.27*	.15	.18*	.08	.08	.59*	.61*	.68*	—								
<b>Preadolescent-reported variables</b>																					
13. Knowledge T1	32.30 (4.22)	-.06	-.07	-.17	.03	.09	.00	.02	-.03	.11	.12	.12	.05	—							
14. Knowledge T2	32.62 (3.64)	-.20*	-.23*	-.17*	-.08	.06	.09	.11	.18*	.32*	.32*	.17*	.18*	.44*	—						
15. Knowledge T3	31.81 (3.95)	-.22*	-.20*	-.20*	-.15	.03	.04	.05	.13	.25*	.26*	.22*	.17	.32*	.58*	—					
16. Knowledge T4	30.92 (4.15)	-.21*	-.23*	-.22*	-.17*	.10	.13	.13	.35*	.19*	.21*	.18*	.15	.20*	.54*	.54*	—				
17. Competence T1	19.72 (3.74)	.03	-.01	-.07	.06	-.05	-.04	-.09	-.05	.26*	.23*	.15	.21*	.32*	.30*	.24*	.15	—			
18. Competence T2	20.24 (3.08)	.04	-.13	-.11	-.04	-.06	-.05	-.12	-.07	.31*	.37*	.25*	.29*	.10	.33*	.37*	.18*	.56*	—		
19. Competence T3	20.83 (3.02)	-.15	-.19*	-.17*	-.10	-.12	-.12	-.08	.05	.28*	.33*	.23*	.27*	.20*	.35*	.46*	.36*	.40*	.56*	—	
20. Competence T4	20.60 (3.15)	-.13	-.18*	-.17*	-.08	.02	.03	-.03	.02	.29*	.30*	.27*	.38*	.15	.21*	.41*	.34*	.25*	.38*	.63*	—

Note. T1 = Year 1; T2 = Year 2; T3 = Year 3; T4 = Year 4.

\* p < .05.

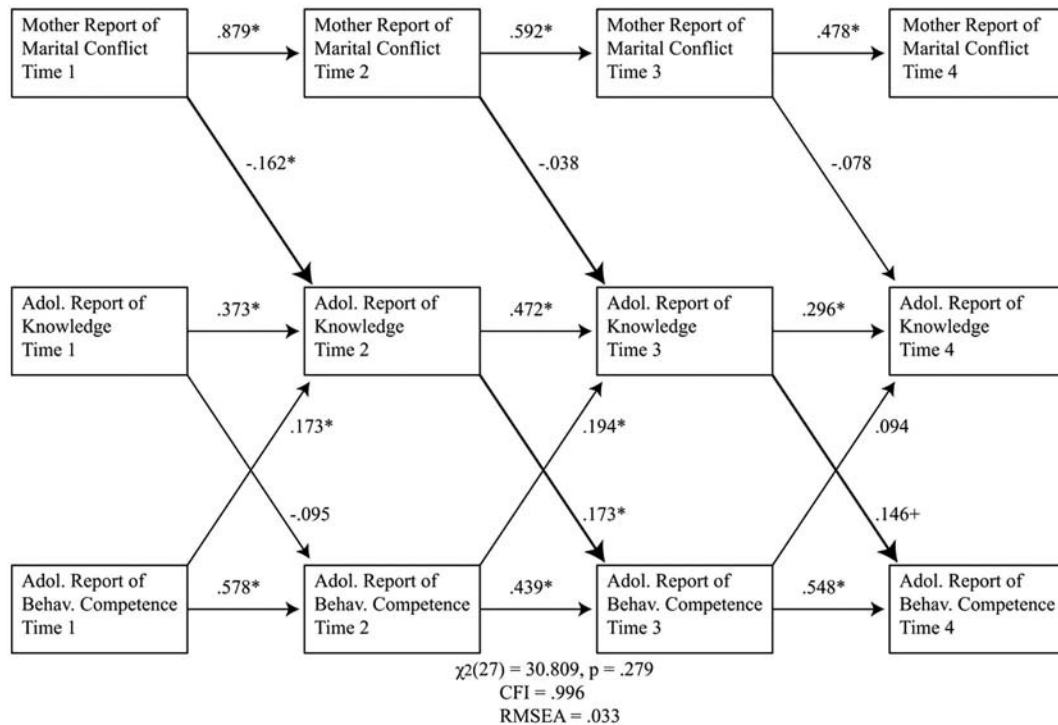


Figure 1. Preadolescent model: mediating effects. Observed variables at Time 1 and errors at concurrent time points are correlated but not depicted. All nonadjacent autoregressive paths are also included but not depicted. Mediating paths are indicated in bold. Adol. = adolescent; Behav. = behavioral; CFI = comparative fit index; RMSEA = root-mean-square error of approximation. +  $p < .10$ . \*  $p < .05$ .

### Alternative Model Analyses

We examined two alternative models that tested the possibility that behavioral competence and knowledge could lead to changes in marital conflict over time. That is, we explored whether behavioral competence led to knowledge, which in turn led to marital conflict, and we explored whether knowledge led to behavioral competence, which in turn led to marital conflict. In brief, neither alternative was supported by either a combination of mother and preadolescent reports or mother reports only. The models did not yield significant direct effects or provide any evidence of mediation. Thus, our hypothesized model appeared to reflect the underlying data structure better than either alternative.

### Discussion

In the present study, we hypothesized that the relation between prior marital conflict and subsequent preadolescent behavioral competence would be indirect and mediated by maternal knowledge. Results indicated that the proposed mediating pattern was supported when preadolescent reports of maternal knowledge and behavioral competence were utilized, particularly for T1 to T3. As predicted, marital conflict at T1 was negatively associated with maternal knowledge at T2. In turn, knowledge at T2 was positively associated with preadolescent behavioral competence at T3.

Thus, preadolescents whose mothers reported high levels of

marital conflict perceived their mothers to be subsequently less knowledgeable. This association is consistent with a number of conceptual articles proposing an association between marital conflict and decreased maternal knowledge. Marital conflict may undermine parental knowledge because conflict reduces psychological resources for parenting and may lead to withdrawal (Easterbrooks & Emde, 1988; Grych, 2002). Preadolescents whose parents are experiencing high levels of conflict may perceive their parents to be less accessible or less interested. Conflict could also lead to decreased communication between parents (Crouter & Head, 2002; Fincham, 1994). In brief, the documented negative effects of marital conflict on family life are likely to create a context for reduced parental knowledge over time.

We also found that preadolescents who reported high levels of maternal knowledge perceived themselves to be more behaviorally competent at subsequent time points, although this linkage was not consistently robust across waves. A stronger path was found between T2 knowledge and T3 behavioral competence, so this relation was not completely generalizable across all 4 years of our study. With this caveat in mind, it is important when interpreting these findings to consider what the knowledge and behavioral competence items measure. The knowledge items may assess a larger underlying construct of maternal involvement with, or interest in, the preadolescent. In turn, the behavioral competence subscale may be viewed as a measure of a preadolescent's ability to regulate his or her own

behavior. This regulation ability is likely to be strongly influenced by parenting. In particular, a history of supportive, attentive parenting evidenced by a knowledgeable mother may be important for the development of such behavioral regulation.

In addition, as predicted, we found significant reciprocal paths between behavioral competence and maternal knowledge. These positive coefficients indicated that knowledge predicted increases in behavioral competence, and competence predicted increases in knowledge. This finding is similar to that reported by Laird et al. (2003), who found reciprocal connections between parental knowledge and delinquency among children in the 9th to 12th grades. Laird et al. reported that knowledge was associated with decreases in delinquency, and delinquency was associated with decreases in knowledge. Our results are consistent with Laird et al. and suggest that variation in behavioral competence as well as variation in delinquency may be correlated over time with knowledge. In conjunction with the findings by Laird and colleagues, our results indicate that variables pertaining to behavioral regulation during adolescence, whether scored in a positive (e.g., competence) or negative (e.g., delinquency) direction, are likely to be reciprocally connected to knowledge and that these connections should be considered in analyses purporting to examine interrelations over time.

Our analyses indicated that the mediating pattern was stronger from T1 to T3 than from T2 to T4. Cox and Paley (1997) suggested that the impact of family processes on child adjustment may be particularly strong at transitional periods because of the challenges and reorganizations taking place during these times. Easterbrooks and Emde (1988) also speculated that the effects of marital conflict on parenting and child adjustment may be more apparent at challenging times in a child's life. Applying such ideas to our results, it is possible that our model variables were more substantially related from T1 to T3 than from T2 to T4 because the former time span better captured the initial transition from middle childhood to early adolescence.

Our models were also better supported when preadolescent reports were used for the mediator and the outcome. One possible reason for the models that utilized only mother reports not showing the proposed mediating pattern is that maternal reports demonstrated a greater degree of rank-order stability than did preadolescent reports. This stability was exhibited by large coefficients for the autoregressive paths, both adjacent and nonadjacent, for all mother-reported variables. Simply put, it is difficult to account for rank-order change in a variable when there is little of this type of change taking place. Other authors have had similar difficulties when utilizing mother reports, particularly when maternal reports of knowledge are examined (for discussion, see Crouter & Head, 2002). It is important to consider the possibility that it may be more informative to use preadolescent reports of parenting-related variables because their perceptions of parenting and family dynamics may have even more influence on their adjustment than their parents' actual behaviors (Laird et al., 2003). We should also note that high rank-order stability in mothers' reports of marital conflict may have been responsible, in part, for the poor fit of our alternative models, which tested prior

behavioral competence and knowledge as predictors of change in marital conflict over time.

Our sample was predominantly European American and middle class. In addition, all of the mothers included in the present analyses were married and never divorced. As a result, our sample consisted mainly of dyads with relatively high and stable resources. A larger, more diverse sample would allow broader generalizations of the findings. We also did not utilize latent variables in the mediation analyses. Only single measures were available for our model variables. Furthermore, it was not appropriate to construct latent variables from combined mother and preadolescent reports because these reports were uncorrelated in some instances and because the models clearly fit differently for mothers and preadolescents. In addition, only mother reports of marital conflict were assessed, and only one type of marital conflict was considered: preadolescent exposure to hostile conflict. Future research could examine whether other aspects of marital conflict (e.g., conflict intensity, degree of conflict resolution) affect parental knowledge in ways similar to overt, hostile conflict. Future studies might also utilize observational methods to assess marital conflict, parenting, and preadolescent adjustment or use additional reporters in the design, such as fathers or teachers.

In discussing divergent findings for preadolescents and mothers, it is important to note that their reports of knowledge were not significantly correlated until T4. Although it is quite possible for children and parents to have divergent, yet equally valid, perceptions of parenting-related variables (Larson & Richards, 1994), the lack of correlation between informants' reports at earlier time points may indicate that earlier reports were less valid than later reports among either preadolescents or mothers. However, because our sample tended to be low risk and because the preadolescents were only 9–10 years old at earlier waves, there was a restriction in range on knowledge in our earlier time points, with most participants reporting relatively high knowledge. This restriction in range, combined with occasions in which the preadolescent and mother had mildly divergent perceptions of maternal knowledge, is likely what reduced the correlation between informants in earlier waves.

Unfortunately, most prior work in this area has focused on older adolescents and their parents (e.g., Stattin & Kerr, 2000). When younger samples have been obtained, researchers have either presented data from preadolescents only (Buehler et al., 2006) or have operationalized knowledge as the degree of convergence between preadolescent and parent reports (Crouter et al., 1990). Our study appears to be the first to examine associations between preadolescent and mother reports of knowledge over time. Clearly, additional studies are needed to further examine issues of validity of measurement of parental knowledge in the preadolescent to early adolescent period.

Limitations notwithstanding, the present article makes several important contributions. First, we found support for our hypothesized mediating model using a new and extremely stringent method of mediation analysis for longitudinal data. By using this new methodology, we were able to reduce the potential bias in the estimated mediating path-



ways, providing a stronger, more accurate test of mediation (Cole & Maxwell, 2003). In addition, our longitudinal data allowed us to test alternative models, neither of which fit as well as did our hypothesized model.

Second, we focused on a relatively understudied period in the marital conflict literature: late middle childhood through early adolescence. It may be particularly important to consider this epoch both because it presents an important transitional period for parents and their children (Cox & Paley, 1997) and because it may be a period in which marital conflict and parent-child dynamics play particularly salient roles in child well-being (Cox & Paley, 1997; Easterbrooks & Emde, 1988). Third, we collected both mother and preadolescent reports of knowledge and behavioral competence. It is important to collect these data from multiple reporters, so as to examine potential similarities and differences in the reports obtained. Although the mother-reported variables did not show evidence of the proposed mediating pattern, a model that used a combination of mother- and preadolescent-reported variables did.

A final contribution of our study is our consideration of a positive aspect of preadolescent behavior as an indicator of adjustment. We examined variation in behavioral competence rather than antisocial behavior as an outcome of marital conflict and knowledge. Our approach is consistent with both the developmental psychology and positive psychology perspectives (e.g., Cummings et al., 2000; Sroufe & Rutter, 1984), and our findings may thus have wider applicability, illustrating how marital conflict, parent-child dynamics, and preadolescent well-being are associated within families over time.

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