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Father-Adolescent Conflict and Adolescent Symptoms: The Moderating Roles of Father Residential Status and Type

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Abstract

Objective: The purpose of this study was to examine if the longitudinal associations between father-adolescent conflict and both externalizing and internalizing symptoms in youth were moderated by fathers' residential status (i.e., whether or not he lived in the home) and type of residential father (i.e., biological or step).

Methods: Adolescents ($N = 146$) completed a measure about conflict with their father or stepfather in 8th and 9th grade. At the same time points, mothers completed measures about the youths' externalizing and internalizing symptoms.

Results: The association between 8th grade conflict and 9th grade externalizing symptoms was moderated by fathers' residential status. Conflict with fathers in 8th grade was positively associated with 9th grade externalizing symptoms when youths resided with their father (biological and stepfathers were included); in contrast, higher levels of father-adolescent conflict were associated with lower levels of subsequent externalizing symptoms when fathers did not live with the youth. Externalizing symptoms in 8th grade did not significantly predict father-adolescent conflict in grade 9. Regarding internalizing symptoms, the association between father-adolescent conflict in 8th grade and internalizing symptoms in 9th grade was moderated by father's residential status; conflict predicted higher levels of internalizing symptoms when the biological father lived elsewhere. Higher levels of 8th grade internalizing symptoms also significantly predicted greater conflict between adolescents and their fathers in 9th grade for residential fathers only.

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Conflict of Interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed were in accordance with the ethical standards of Vanderbilt University's Institutional Review Board and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

Conclusions: The associations among adolescent emotional and behavioral outcomes and paternal-child relationship qualities vary with symptom type and family structures and, thus, warrant further comprehensive study.

Keywords

psychiatric symptoms; father-child relationship; conflict; stepfathers

Research has shown that fathers significantly affect children's development, including their mental health (Bornovalova et al., 2014; Kane & Garber, 2004; Lewis & Lamb, 2003). Not surprisingly, positive father-child relationships have been found to be associated with better youth mental health (e.g., Adamsons & Johnson, 2013; Carlson, 2006), even after controlling for the quality of adolescents' relationship with their mothers (Lansford, Laird, Pettit, Bates, & Dodge, 2014; Sheeber, Davis, Leve, Hops, & Tildesley, 2007; Vazsonyi & Belliston, 2006). In contrast, high father-child conflict has been shown to predict worse mental health in adolescents (Bornovalova et al., 2014; Delgado, Kiloren, & Updegraff, 2013). Despite the different family constellations present in today's society (Cherlin, 2009), relatively little is known about how father-adolescent relationship quality, especially conflict, is related to adolescents' mental health within various family structures. Even less is known about the reverse association; that is, how adolescents' mental health is linked to father-adolescent conflict in different family constellations. Better understanding of how varied family contexts and father-child relationships predict youth mental health is important, especially given that the rise in nonresidential fatherhood has led to millions of tax dollars being spent on programming to prevent its deleterious effects on children, such as the Healthy Marriage and Responsible Fatherhood initiative (Hawkins, Amato, & Kinghorn, 2013).

Positive associations have been found between father-adolescent conflict and adolescent depressive symptoms (Delgado et al., 2013; Sallinen, Ronka, Kinnunen, & Kokko, 2007) and disorders (Marmorstein & Iacono, 2004; Sheeber et al., 2007). Even after controlling for conflict in mother-adolescent and mother-father dyads, conflict in father-adolescent dyads remained a significant correlate of adolescent depressive symptoms (Cole & McPherson, 1993). Father-adolescent conflict also has been linked with antisocial/externalizing behaviors (Bornovalova et al., 2014; Delgado et al., 2013; Shek & Ma, 2001) and disruptive behavior disorders (Bornovalova et al., 2014; Marmorstein & Iacono, 2004). Associations between father-adolescent conflict and youth symptoms also have been observed in samples from several different countries including Hungary and Switzerland (Vazsonyi & Belliston, 2006) and China (Yin, Li, & Su, 2013). Finally, correlations between father-adolescent conflict and youths' symptoms have been found in divorced families (Thomas & Forehand, 1993), in samples involving adoptive and biological families (Bornovalova et al., 2014), single and two-parent biological families (Summers, Forehand, Armistead, & Tannenbaum, 1998), and intact, divorced, and blended families (Vazsonyi & Belliston, 2006).

Research also indicates that the association between family conflict and children's symptoms is greater at higher levels of contact (e.g., Modecki, Hagan, Sandler, & Wolchik, 2015). Modecki et al. (2015) found that high levels of father involvement during adolescence

in the context of high inter-parental conflict were associated with greater externalizing problems during young adulthood than were moderate levels of father involvement in the context of low conflict. Similarly, another study showed that children's conflict with their fathers had a direct effect on youths' disruptive behavior problems (Bornovalova et al., 2014). One interesting and important question that follows from this prior research is whether the link between father-adolescent conflict and adolescents' symptoms differs when the father is or is not present in the home.

Whereas some studies have shown that conflict predicts adolescent psychiatric symptoms (e.g., Cole & McPherson, 1993), one study did not find that adolescent-father hostility predicted subsequent depressive symptoms (Lewis, Collishaw, Thapar, & Harold, 2014). Barrera and Stice (1998) reported that father-adolescent conflict concurrently, but not prospectively, related to adolescents' externalizing behaviors (although that sample involved only intact families, half of whom had a father with alcohol use problems). Moreover, the direction of the association between parent-child conflict and child symptoms is unclear. Adolescents' externalizing behaviors have been shown to predict greater mother-adolescent conflict (Castellani et al., 2014; Georgiou & Fanti, 2014). Research with regard to internalizing symptoms is more mixed; one study found that adolescents' depressive symptoms predicted higher levels of mother-adolescent hostility (Lewis et al., 2014), whereas another study did not find a longitudinal association between internalizing symptoms and mother-child conflict (Georgiou & Fanti, 2014). Of these studies examining the link between children's symptoms and conflict with their parents, only Lewis et al. (2014) assessed the father-adolescent relationship in particular and found that adolescents' depressive symptoms predicted greater father-adolescent hostility for girls. No research, however, has specifically examined possible bidirectional, longitudinal associations between father-adolescent conflict and both internalizing and externalizing symptoms within the same sample.

Even less research on parent-adolescent conflict and psychiatric symptoms has included stepfathers. Yet, a positive relationship with stepfathers has been found to be associated with fewer externalizing and internalizing symptoms (King, 2006; White & Gilbreth, 2001) and general psychological problems (Bronstein, Stoll, Clauson, Abrams, & Briones, 1994). Relatedly, adolescents who reported that they 'mattered' to their stepfather endorsed fewer internalizing and externalizing symptoms (Schenck et al., 2009), as did those who reported feeling closer to residential parents in stepfamilies (Amato, King, & Thorsen, 2016). Moreover, some studies have shown that lower levels of teen symptoms were more strongly associated with more positive relationships with stepfathers than with nonresident, biological fathers (King, 2006; White & Gilbreth, 2001). In contrast, conflict with one's stepfather has been linked with higher levels of both depressive symptoms and problem behaviors, although this association was nonsignificant when mother-involvement was included in the models (Yuan, Vogt, & Hamilton, 2006).

Finally, in mother-only homes, the presence of a mother figure who provides high quality parenting has been shown to be associated with lower levels of psychological problems in adolescents (Simons, Whitbeck, Beaman, & Conger, 1994; Zhou, Sandler, Millsap, Wolchik, & Dawson-McClure, 2008). Much less is known, however, about the contribution of

nonresidential fathers to adolescents' functioning in homes in which mothers do not exhibit such positive characteristics, such as has been found with depressed mothers (e.g., Foster, Garber, & Durlak, 2008). Offspring of mothers with histories of depression are at increased risk for internalizing and externalizing problems (Goodman et al., 2011), and there is some evidence that mother-child relationship quality mediates that association (Burt et al., 2005; Foster et al., 2008). Does the presence of a father in the home and the quality of the father-child relationship, either directly or in interaction with each other, further contribute to the mental health of these children over and above any effects of maternal depression and mother-child conflict?

Youth in grades 8 and 9 were the focus of the present study because rates of parent-child conflict (Shanahan, McHale, Osgood, & Crouter, 2007) and internalizing symptoms (e.g., Nivard et al., 2017) tend to increase during this developmental period. In addition, we controlled for the amount of time since the parents' separation/divorce because timing of divorce also has been found to predict children's symptom levels (e.g., Culpin, Heron, Araya, Melotti, & Joinson, 2013). To explore the contribution of father-child conflict beyond the initial "crisis period" around the time of the separation/divorce (Hetherington, 1989), we required that the time since the marital separation for divorced families be at least two years.

The present study tested the following hypotheses. First, higher levels of father-adolescent conflict will predict higher levels of internalizing and externalizing problems in adolescents. Second, adolescents' internalizing and externalizing symptoms will predict increases in father-adolescent conflict. Third, the longitudinal associations between father-adolescent conflict and adolescents' symptoms will be greater for youth whose fathers reside in the home. In addition, we examined differences in these associations for step versus biological fathers in the home and for potential differences for boys versus girls.

Method

Participants

Participants were part of a longitudinal study of 240 adolescents who varied in their risk for behavioral and emotional problems. From this study, 204 participants who lived with their mothers had a father figure with whom they had regular and recent (past month) contact, and had not experienced the divorce of their biological parents in the past 2 years ($n = 2$) or the divorce or re-marriage of their mother or a change in custody ($n = 7$) during the study period of interest. Of these 204 families, 146 had sufficient data on the measures to be included in the present analyses; 83 children lived with both biological parents (82 of those parents were married), 29 had a stepfather as their primary father figure, and 34 lived in (biological) single-mother households. Table 1 presents demographic information for the sample separately for youth with residential fathers versus youth with a biological father who lived outside the home. Adolescents whose mothers had a history of depression were significantly more likely to not have a father residing in the home.

Procedure

Parents of children from metropolitan public schools were invited to participate in a study about parents and children. A brief health history questionnaire comprised of 24 medical conditions (e.g., diabetes, heart disease, depression) and 34 medications (e.g., Prozac, Valium) was sent with a letter describing the study to over 3500 families. Of the 1495 mothers who returned the questionnaires, 587 endorsed either a history of depression, use of antidepressants, or no history of psychopathology and were interviewed further by telephone. The remaining families were excluded because the mother either did not indicate depression or reported serious health problems (e.g., cancer, multiple sclerosis). Based on screening calls with the 587 families, 349 mothers were identified as having either a history of depression or no history of psychiatric problems. The 238 families not further screened were excluded due to the mother's insufficient number of symptoms to meet criteria for a depressive disorder (38%) or other psychiatric disorders that did not also include a depressive disorder (19%), the mother or target child having a serious medical condition (14%), being no longer interested (21%), the target child being in the wrong grade (6%), or moving out of the area (2%). The Structured Clinical Interview for *DSM* diagnoses (SCID; Spitzer, Williams, Gibbon, & First, 1990) was then conducted with the 349 mothers who indicated during the screening calls that they had had a history of some depression or had had no psychiatric problems. Inter-rater reliability calculated on a random subset of 25% of these SCID interviews yielded 94% agreement ($\kappa = .88$) for diagnoses of depressive disorders. The final original sample consisted of 185 mothers who had histories of mood disorders (e.g., major depressive disorder, dysthymia) and 55 mothers who were lifetime free of psychopathology. (For more information about the procedures see Bohon, Garber, & Horowitz, 2007; Carter, Garber, Ciesla, & Cole, 2006). The current study included 112 mothers with a history of depressive disorders (high-risk) and 42 mothers with no psychiatric disorders (low-risk). An evaluator, unaware of the mother's psychiatric history, individually administered a battery of questionnaires to the mothers and adolescents during grades 8 and 9. Measures relevant to the current study are described here.

Measures

Fathers' residential status.—At each data collection, mothers reported with whom the youth lived, including the presence of a father figure, either biological or step. Thirty-four (23.3%) of the 146 participants did not live with a father figure in 8th or 9th grade, but had regular contact with their biological father, including in the month prior to each data collection.

Father-adolescent and mother-adolescent conflict.—The Conflict Behavior Questionnaire (CBQ; Prinz, Foster, Kent, & O'Leary, 1979) was administered at both data collections to assess adolescents' perceptions of conflict and negative communication with their mothers and their primary father figure. This 20-item *true* (1) - *false* (0) measure yields scores ranging from 0 to 20, with higher scores reflecting more parent-child conflict. Sample items include: "My father and I never seem to agree" and "My mother understands me" (reverse scored). The CBQ has good reliability and validity (Robin, 1984); internal consistency reliability in the present sample was high (all coefficient alphas $> .93$).

Externalizing and internalizing symptoms.—The Child Behavior Checklist (CBCL; Achenbach, 1991) was completed by mothers about their children in both grades 8 and 9. The CBCL assesses behavioral and emotional symptoms on two higher order scales: externalizing and internalizing problems. The externalizing scale measures aggression and delinquency; the internalizing scale measures anxiety, depression, and somatic symptoms. Respondents indicated how true each item was about the adolescent using a scale from 0 = *not true* to 2 = *often true*. T-scores for the externalizing and internalizing scales were used in the present analyses so that results could be more easily interpreted as compared to the normative epidemiological data. The CBCL yielded a high level of internal consistency reliability (externalizing scale coefficient alphas = .93; internalizing scale coefficient alphas = .89).

Data Analyses

Following missing data analyses and examination of the correlations and multicollinearity diagnostics, hierarchical linear regression analyses (Cohen & Cohen, 1983) were conducted to test the longitudinal associations among father-adolescent conflict and levels of internalizing and externalizing symptoms, and to determine if these associations were moderated by a father's presence in the home. When predicting 9th grade externalizing behaviors, 8th grade externalizing, as well as concurrent (9th grade) levels of internalizing symptoms, were entered first. Similarly, when predicting level of internalizing, prior level of internalizing and comorbid externalizing symptoms were controlled in Step 1. Concurrent, comorbid symptoms were controlled due to the high level of overlap between internalizing and externalizing symptoms and to examine if the associations were unique to either type of symptoms. Adolescents' sex, risk status (i.e., mothers' depression history), number of years since parents' divorce/separation, and adolescents' levels of conflict with their mothers in 8th grade also were entered in the first step. Adolescents' level of conflict with their father figure as reported in 8th grade and fathers' residential status were entered in the second step. In the third step, the interaction of the fathers' residential status and the conflict variable was entered as well as two-way interactions with adolescents' sex. In the final step, the three-way interaction of adolescent sex by fathers' residential status by conflict was added. (Interaction terms were computed with mean-centered variables.)

When predicting 9th grade father-adolescent conflict, adolescents' sex, risk status, the number of years since parents had divorced/separated, father-adolescent conflict in 8th grade, and mother-adolescent conflict in 9th grade were all controlled in the first step. The main effects of father residential status and 8th grade internalizing and externalizing symptoms were entered in the second step. Then, the two-way interactions of internalizing and externalizing symptoms in 8th grade with each other and with father residential status were entered in the third step along with each of those variables' interactions with adolescent sex. In the last step, the three-way interactions of adolescent sex and father's residential status with each of the symptom variables were added.

Finally, to test if the associations between conflict and symptoms differed for step versus biological fathers in the home, the above regression analyses were re-run with only families with father figures in the home. These analyses were similar to the ones described above,

except the father residential status variable was replaced with one denoting if a biological or stepfather lived in the home. None of the interactions with sex were significant; thus, analyses without sex are reported.

Results

Missing Data Analyses

Missing data analyses were run to compare participants who were included in the present analyses and those who were not, but who, at the most recent prior data collection, reported they had a father figure with whom they had regular contact. The 58 youth with missing data were not included in the analyses due to missing all data for these analyses ($n = 20$), all 9th grade data ($n = 18$), all 8th grade data ($n = 10$), or father CBQ data for one ($n = 6$) or both time points ($n = 4$). Imputing data for the father CBQ was not done because adolescents were the only informants about their conflict with their fathers and it was the primary variable of interest. Missing CBCL data were imputed only when there also was concurrent symptom information for that time period ($n = 8$). Sometimes, mothers still participated in the study even when youth did not; thus, youth who participated in 8th grade and whose mothers also participated in 9th grade were still included in the regression predicting 9th grade symptoms ($n = 19$), but not regressions predicting 9th grade conflict. Adolescents included in at least some of the present analyses did not differ significantly from the remainder of the teens who had reported regular contact with a father figure ($n = 58$) regarding adolescents' age, sex, SES, race, maternal history of depression, parental marital status, number of years since the biological parents had lived together, type of father figure (i.e., biological or step), or prior symptom or conflict levels (7th grade).

Descriptive Statistics and Correlations

Descriptive statistics and correlations among all variables used in the regression analyses are presented in Table 2. Mothers' with a history of depression had children with significantly higher levels of internalizing and externalizing symptoms as well as conflict with both mothers and fathers in 8th grade; conflict with fathers in 9th grade showed a nonsignificant trend to be associated with maternal history of depression. Maternal depression also was associated with a greater likelihood of being divorced and being divorced longer. The number of years since the biological parents had lived together correlated positively with adolescents' level of externalizing symptoms in 8th and 9th grade, but not with internalizing symptoms at either time point. Furthermore, a significant positive association was found between levels of externalizing symptoms in both 8th and 9th grades and father-adolescent conflict as well as mother-adolescent conflict in both grades. In contrast, internalizing symptoms were less consistently associated with youth conflict with parents. The presence of a father figure in the home was not associated significantly with type of symptoms or adolescents' level of conflict with either parent.

Multicollinearity Diagnostics

Given that some of the predictor variables were highly correlated, multicollinearity diagnostics (tolerance and variance inflation factor) were conducted for the predictors within each proposed regression. Although recommendations for cutoffs vary (Thompson, Kim,

Aloe, & Becker, 2017), in each case the multicollinearity diagnostics did not indicate significant issues; that is, for all main effects, tolerances were above .1 and variance inflation factors were below 3.0. Thus, all of the proposed variables were utilized in the regressions.

Prediction of Adolescents' Externalizing and Internalizing Symptoms in 9th Grade

Table 3 displays the results of the hierarchical linear regression analyses of the main effect of father-adolescent conflict in 8th grade and its interaction with father's residential status predicting adolescent externalizing and internalizing symptoms a year later.

Externalizing symptoms.—As hypothesized, the association between father-adolescent conflict and externalizing symptoms was moderated by the father's residential status ($\beta = 0.74, p < .05$), after controlling for 8th grade externalizing symptoms, comorbid (9th grade) internalizing symptoms, sex, risk, years since divorce, and mother-adolescent conflict (see Table 3). Figure 1 displays this significant interaction. For adolescents who lived with a father figure, higher levels of conflict with that father were associated with higher levels of externalizing symptoms, albeit to a nonsignificant degree [partial $r(104) = .16, ns$, controlling for all variables in the model except father residential status]. In contrast, for adolescents who did not live with their fathers, higher levels of conflict were associated with fewer externalizing problems [partial $r(26) = -.34, p < .08$].

Internalizing symptoms.—When predicting 9th grade internalizing symptoms, in the model that controlled for 8th grade level of internalizing, comorbid externalizing symptoms, sex, risk, years since divorce, and mother-adolescent conflict, and included father-adolescent conflict in 8th grade and father residential status, we found that the two-way interaction of conflict and father residential status significantly predicted internalizing symptoms in 9th grade ($\beta = -.90, p < .05$; see Table 3). Figure 2 displays the association between father-adolescent conflict in 8th grade and 9th grade internalizing symptoms for adolescents whose fathers did versus did not reside in the home. Among adolescents whose fathers did *not* live with them, higher levels of conflict with fathers were associated with higher levels of internalizing symptoms [partial $r(26) = .32, p < .10$, controlling for all the variables in the regression except father residential status]. In contrast, conflict with fathers in the home (biological or step) was not related to internalizing symptoms in the youth [partial $r(104) = -.02, ns$].

Prediction of Father-Adolescent Conflict in 9th Grade

When predicting 9th grade father-adolescent conflict, a single regression was run to control for comorbid symptoms and to allow examination of unique relations of internalizing versus externalizing symptoms to subsequent conflict. The sample size for this analysis was reduced ($n = 127$) due to missing 9th grade data for some adolescents regarding their conflict with fathers. After controlling for 8th grade levels of father-adolescent conflict, 9th grade mother-adolescent conflict, sex, risk, and years since divorce, father's residential status and 8th grade symptoms, neither internalizing nor externalizing symptoms predicted conflict levels in 9th grade. (See Table 4.)

Analyses Examining the Moderating Role of Father Type for Fathers in the Home

All three regressions were re-run for only youth who had a father (biological or step) residing in the home with them. In these analyses, the type of father was used in place of the father's residential status. There were no significant interactions with type of father in these analyses. There was a significant main effect for 8th grade internalizing symptoms when predicting conflict with fathers in 9th grade ($\beta = .15, p < .05$; see Table 4). Teens with higher levels of 8th grade internalizing symptoms also had higher levels of conflict with their fathers in the home (step or biological) in 9th grade, controlling for 8th grade levels of father-adolescent conflict, 9th grade mother-adolescent conflict, sex, risk, and years since divorce (8th grade externalizing symptoms and type of father also were included).

Discussion

This one-year prospective study found evidence of longitudinal associations between adolescents' report about conflict with their fathers and mothers' report of adolescents' internalizing and externalizing symptoms; the nature of these relations varied by type of adolescent symptoms and fathers' residential status, but not father type (step or biological). Consistent with the hypotheses, bivariate correlations were positive and significant between father-adolescent conflict in 8th grade and both externalizing and internalizing symptoms in 9th grade. Yet, the regressions analyses, which controlled for prior levels of predicted symptoms, concurrent other symptoms, adolescent sex, risk (i.e., maternal depression), years since the parents' divorce/separation, and levels of mother-adolescent conflict, revealed that the association between conflict with fathers and adolescents' symptoms was moderated by fathers' residential status. Regarding the reverse association, 8th grade internalizing and externalizing symptoms also had significant bivariate correlations with 9th grade father-adolescent conflict, but those associations were not significant in the regression analysis with the full sample, which controlled for 8th grade levels of father adolescent conflict, 9th grade levels of mother-adolescent conflict, adolescent sex, risk, and years since the parents' divorce/separation. Yet, in the regression involving only teens with a father in the home, 8th grade internalizing symptoms were significantly associated with 9th grade father-adolescent conflict. However, there was no evidence that either type of 8th grade symptoms interacted with father residential status or type of father in the home to predict 9th grade father-adolescent conflict.

The relation between conflict with fathers in 8th grade and adolescents' externalizing symptoms in 9th grade differed significantly depending on if the father resided in the home or not. Father-adolescent conflict had a positive association with adolescents' externalizing symptoms in 9th grade when fathers, either biological or step, lived in the home, but was negatively associated with externalizing symptoms in 9th grade when fathers lived outside the home. That is, for adolescents whose fathers did not reside in the home, higher levels of father-adolescent conflict were associated with lower levels of externalizing problems. Although in the current sample the positive association between 8th grade father-adolescent conflict and 9th grade externalizing symptoms was nonsignificant, it should be noted that such a positive association is consistent with prior research, which often did not control for prior symptoms (e.g., Bornoalova et al., 2014; Modecki et al., 2015). One reason for

positive associations between conflict with fathers and adolescents' externalizing symptoms when fathers live in the home may be that children who experience highly conflictual relationships with their father learn and model such negative behaviors the more they are exposed to them. Children who experience high levels of inter-parental conflict, for example, have been found to exhibit more externalizing behaviors (Modecki et al., 2015). Gene-environment research has shown that both mother-child and father-child conflict is associated with increased risk of disruptive behavior disorder symptoms (Bornovalova et al., 2014). Perhaps adolescents who experience or perceive greater conflict with their fathers have a shared temperament (e.g., irritable) that contributes to both the likelihood of their having conflict with a parent, and engaging in externalizing behaviors. Genetic contributions and exposure to family conflict could both explain why the association between 8th grade father-adolescent conflict and 9th grade externalizing symptoms, albeit positive, was no longer significant in the regressions after controlling for prior levels of symptoms, among other things.

Interestingly, exposure to conflict (or lack thereof), but not genetics, could explain why when the father did *not* live in the home, the link between father-adolescent conflict and adolescents' externalizing symptoms was reversed; that is, when the father and youth did not live together, greater conflict in 8th grade predicted lower levels of externalizing symptoms in 9th grade. This result is consistent with a study by Buchanan, Maccoby, and Dornbusch (1996) who found that increased level of conflict with nonresidential parents was associated with better adjustment. If greater exposure to conflict tends to predict higher levels of externalizing symptoms, then it makes sense that when the father-adolescent relationship contains high levels of conflict, relatively less exposure to such conflict may be better for the adolescent's adjustment.

Why might low levels of father-adolescent conflict predict more externalizing symptoms when fathers did not live in the home? Perhaps even without a negative father-adolescent relationship, the physical absence of a father is associated with greater parenting demands and challenges for the single mothers. Indeed, lower quality parenting by mothers following divorce has been associated with more adolescent externalizing behaviors (Simons, Lin, Gordon, Conger, & Lorenz, 1999). Thus, not having a father present in the home with whom to interact, particularly if combined with maternal parenting difficulties, may contribute to increased disruptive behaviors. Another possibility is that adolescents without residential fathers might display more externalizing problems as a way to keep fathers engaged in their lives. When their disruptive behaviors lead to their father being contacted (e.g., the school requests both parents at a conference; mother calls father to report problematic behavior), youth might perceive that at least their fathers are involved in their lives, even if for a negative reason.

A different pattern emerged for adolescents' internalizing symptoms, such that higher levels of father-adolescent conflict in 8th grade predicted higher levels of internalizing symptoms in 9th grade for adolescents whose fathers lived outside the home, but was unrelated to internalizing symptoms for youth who had a father in the home. Thomas and Forehand (1993) similarly found that father-adolescent conflict predicted levels of anxiety-withdrawal in adolescents from divorced, but not intact, families. Loss of a relationship with a father

also has been associated with more internalizing symptoms (Culpin et al., 2013; McCabe, 1997; Mott, Kowaleski-Jones, & Menaghan, 1997). Perhaps the combination of one's father living elsewhere and high levels of conflict compounds the amount of distress associated with each.

Another possible explanation for these findings is that adolescents from mother-headed households typically interact with their fathers without their mothers being present. Therefore, they would not have the benefit of possible support from their mothers when conflict with their fathers occurred. In the context of conflictual father-child interactions, adolescents without the buffer of a supportive mother may be at increased risk for emotional problems (Dubow & Tisak, 1989).

Additionally, when there is a high level of father-child conflict, but the father does not live in the home, fewer opportunities are available to resolve disputes. Unresolved family conflict has been associated with later internalizing symptoms in children (Brock & Kochanska, 2016). Children who are unable to address the conflict with their fathers due to having only limited contact with him may feel worse about their relationship because they may perceive the conflict as a form of rejection (Rubenstein & Feldman, 1993). It is noteworthy that high conflict with nonresidential biological fathers was associated with higher levels of internalizing symptoms relative to the other combinations of conflict and father residential status and types. Thus, this appears to be a particularly distressing combination when considering adolescents' adjustment.

Interestingly, in analyses of only those adolescents who had a father figure living in the home, conflict was not associated with subsequent levels of internalizing symptoms. Although several previous cross-sectional studies have found that father-adolescent conflict correlated with internalizing symptoms (Summers et al., 1998; Thomas & Forehand, 1993), depressive symptoms (Cole & McPherson, 1993; Delgado et al., 2013; Sallinen et al., 2007), and depressive disorders (Marmorstein & Iacono, 2004; Sheeber et al., 2007), a longitudinal study did not find that father-adolescent conflict predicted subsequent levels of depressive symptom (Lewis et al., 2014). Although Lewis and colleagues examined different dependent variables (depressive versus internalizing symptoms), the results of both suggest that father-adolescent conflict may not be prospectively related to internalizing symptoms when fathers and adolescents live together, especially once other variables are controlled, such as comorbid externalizing symptoms.

The current study further added to the literature by examining whether the reverse direction of the connection between adolescents' symptoms and conflict with fathers also was significant. When other variables were controlled (e.g., maternal depression, prior levels of father-adolescent conflict), adolescents' externalizing symptoms did not prospectively predict father-adolescent conflict either directly or in interaction with fathers' residential status or type of father in the home. Although research support for Patterson's coercive family process model indicates that conflictual child-parent interactions and externalizing behaviors tend to escalate over time (Patterson, 2016), some other studies have found that parents of youth who present with problem behaviors become less involved with them (Dishion, Nelson, & Bullock, 2004), which could have the paradoxical effect of decreasing

conflict with them. Variability in fathers' responses to their children's externalizing behaviors might partially account for the absence of an effect of externalizing symptoms on subsequent conflict levels observed here.

In contrast, we found some evidence of a reverse association between internalizing symptoms and conflict. Higher levels of internalizing symptoms in 8th grade significantly predicted higher levels of adolescent-father conflict in 9th grade, but only when analyses were restricted to residential fathers. This association was not significantly moderated, however, by the father's residential status or type of father in the home. That is, higher levels of internalizing symptoms predicted more conflict with residential fathers, regardless of whether fathers were biological or step. This finding is consistent with previous cross-sectional research showing that more internalizing symptoms were associated with greater parent-child conflict (e.g., Delgado et al., 2013). Perhaps living with a distressed adolescent increases parent-adolescent conflict, especially if the teen is irritable (Stringaris, Maughan, Copeland, Costello, & Angold, 2013). If irritability was a primary reason that higher levels of internalizing symptoms in 8th grade were associated with more father-adolescent conflict in 9th grade, then it makes sense that this association was significant for both types of fathers in the home. These results should be interpreted with caution, however, given that the interaction between adolescents' internalizing symptoms in 8th grade and fathers' residential status when predicting father-adolescent conflict in 9th grade for the entire sample was not significant.

Similar to prior research (e.g., Barrera & Stice, 1998; Lewis et al., 2014), the current study generally found significant cross-sectional relations between father-adolescent conflict and adolescents' symptoms (especially externalizing ones), but did not find significant prospective, direct associations with subsequent symptoms once prior levels of symptoms were controlled, without also considering the father's residential status. That is, we found that father-adolescent conflict prospectively predicted both externalizing and internalizing symptoms only when we accounted for fathers' residential status (i.e., presence versus absence). For fathers who lived with the youth, associations were similar for both step and biological fathers. Barrera and Stice (1998) did not find that father-adolescent conflict and paternal support interacted to predict changes in their children's psychopathology. In contrast, Healy, Malley and Stewart (1990) reported that the combination of greater frequency of father visits and higher perceived closeness to fathers predicted lower levels of symptoms in youth. Similarly, Carlson (2006) found that fathers' residence and level of involvement interacted to predict both internalizing and externalizing symptoms, such that fathers' involvement was associated with lower symptom levels when he lived in the home.

Thus, the link between father-child relationship characteristics and adolescent symptoms is complex and likely depends, in part, on the father's residential arrangements and associated contact with the child. To date, very little longitudinal research has examined the prospective prediction of adolescent symptoms to subsequent father-adolescent conflict, and none has explored how this varies by the residence or type of father. The current results suggest that internalizing symptoms predict subsequent father-adolescent conflict differently when the father lives in versus outside the home.

Strengths, Limitations, and Future Directions

Strengths of this study include its longitudinal design and examination of different types of families and adolescent symptoms. There has been limited research on how father-adolescent conflict affects changes in adolescents' mental health. The present study found that fathers' residential status and father-adolescent conflict interacted to predict changes in behavioral and emotional symptoms one year later. Moreover, these effects differed depending on the types of symptoms examined (i.e., externalizing, internalizing). Even fewer studies have explored the link between adolescents' symptoms and subsequent parent-child conflict (Castellani et al., 2014; Lewis et al., 2014). The current study adds to this very limited literature by showing that adolescents' internalizing symptoms were positively associated with later father-adolescent conflict if the father resided in the home.

Adolescents' symptoms also were not simply due to the immediate effects of divorce, as approximately half of the youth were from intact families and the average time since divorce in the other families was over eight years. Thus, this study demonstrated that father-adolescent conflict has significant yet varied associations with adolescents' well-being, and that adolescents' internalizing and externalizing symptoms have different links with father-adolescent conflict.

Limitations of this study highlight directions for future research. First, adolescent self-report questionnaires were used to assess father-child conflict; thus, the extent to which teens' perceptions of their relationship reflect their fathers' or objective observers' perceptions was not known. Significant associations have been found between children's, parents', and observers' reports of conflict (Sheeber et al., 2007), but the relative contribution of each perspective to adolescents' mental health is less clear. Nevertheless, adolescents' perceptions of their relationship with their fathers are important to assess because they are the filter through which youth experience this relationship.

Second, categorizing fathers as 'absent or present' from the home clearly ignores variability in the amount of time fathers spend with their children. Some residential fathers work many hours and actually spend limited time interacting with their children, whereas some nonresidential fathers spend many hours per week with their offspring. Unfortunately, the present study did not ask how much time residential fathers spent at home. Moreover, the subset of youth with nonresidential fathers was on the small side for examining how the interaction between conflict and amount of contact affected subsequent symptoms, especially with all the other variables in the model. We did attempt these regressions post-hoc, and the interaction between father-adolescent conflict and amount of contact in 8th grade did not significantly increment the prediction of either 9th grade externalizing or internalizing symptoms. Of note, there was limited variability in how much time the fathers were reported to have spent with their children; a few spent a great deal of time together, but most spent the equivalent of one or two weekends per month. Although previous research has found little correlation between amount of paternal contact and children's mental health (Adamsons & Johnson, 2013), it may still be important to examine the interaction of amount of father contact with both positive and negative relationship qualities to predict children's symptoms in larger samples with greater variability in father-adolescent contact.

Third, father-child conflict was assessed regarding the biological father *or* stepfather. Children who had two father figures were asked to report about the degree of conflict with the father figure they saw most often; thus, for adolescents whose mothers had re-married, we did not have conflict ratings for both step- and biological fathers. Some studies of both biological and stepfathers have suggested that a positive relationship with either father is beneficial, and that the effects of the two are not additive (King, 2006; Schenck et al., 2009). Moreover, there is some evidence that a positive relationship with a residential stepfather has more mental health benefits than does one with a nonresident biological father (Amato et al., 2016; King, 2006). Future investigations should examine the combined contributions of biological- and stepfather-child relationship quality to adolescents' mental health. Nevertheless, one strength of the present study was the inclusion of stepfathers who served as the primary father figure. Family constellations are increasingly more varied (Cherlin, 2009) and, therefore, examining children's adaptation in the context of different types of families and father figures is becoming increasingly relevant.

Fourth, the significant effects in the current study accounted for a relatively small additional amount of variance in the dependent variables, over and above the contribution of the many control variables, including prior symptoms and conflict levels (depending on analyses), which had high stability coefficients. Given the relatively limited amount of variance left to explain, the results indicate that father-adolescent conflict and youths' symptoms likely predict each other even after prior levels of each and other covariates are controlled, especially when father's residence is taken into account. Future studies should consider the complex interplay of the associations among various father-child relationship characteristics and children's emotional and behavioral problems, particularly in larger samples, and using more complex data analytic methods (e.g., dynamic latent change score analyses; McArdle & Hamagami, 2001) that can address the bidirectional connections among these variables over time.

Fifth, sample size likely limited the ability to detect some effects. For example, no sex differences in the relations between conflict and symptoms within the various types of family structures were found. Mott et al. (1997) showed that the presence of a stepfather accounted for more of the association between father absence and problem behaviors for girls than for boys. Furthermore, Lewis et al. (2014) reported bidirectional associations between mother-child hostility and depression for girls, but not for boys or for father-adolescent hostility. Moreover, Castellani et al. (2014) found that high levels of mother-adolescent conflict were associated with delinquency in both sexes, but with depression for males only, and there were no significant interactions with type of father in the home. Thus, it is possible that the relatively small number of youth with stepfathers in the current sample prevented us from detecting sex differences in the relations between symptoms and father-adolescent conflict for biological versus stepfathers. Additional research examining differences between males and females as well as biological versus stepfathers is warranted.

Finally, the present study examined father-child conflict in the context of maternal depression. Previous studies of the father-child relationship typically have not considered mothers' levels of functioning or psychopathology or controlled for levels of mother-child conflict. The present study contributed to our understanding of the nature of the father-child

relationship for mothers with and without histories of mood disorders. We found that a negative relationship with a father figure predicted adolescents' outcomes over and above the effects of maternal depression history and mother-child conflict. The present study oversampled for mothers with a history of mood disorders, and therefore, it is possible that problematic relationships with a father contribute more to adolescent emotional and behavioral problems in the context of maternal depression due to the challenges it already presents to children's mental health (e.g., Goodman et al., 2011). This might be especially true in the present study given that all but one of the mother-headed households had a mother with a history of depression. Thus, conflict with residential versus nonresidential fathers may not differ in their association with subsequent symptoms when a lower proportion of divorced, non-remarried mothers have depression histories. Although the extent to which these findings generalize to a community sample should be explored, further understanding of how fathers in various family structures may impact the development of youth psychiatric symptoms within the context of high risk samples is important because such samples are particularly helpful in understanding mechanisms of risk (Avenevoli & Merikangas, 2006).

In sum, the present study found that the longitudinal relations between father-adolescent conflict and adolescents' symptoms varied by type of symptoms as well as whether or not their father figure lived in the home, but not the type of residential father. This study goes beyond previous research that has considered the effect of the father-child relationship in a broad context of either contact or quality. Few studies have examined the dimension of conflict in father-adolescent dyads, its interaction with residential status, or the possible bidirectional nature of these associations. The findings presented here highlight the need to employ a more comprehensive approach that examines a variety of possible associations among adolescent outcomes and paternal-child relationship qualities within various family structures.

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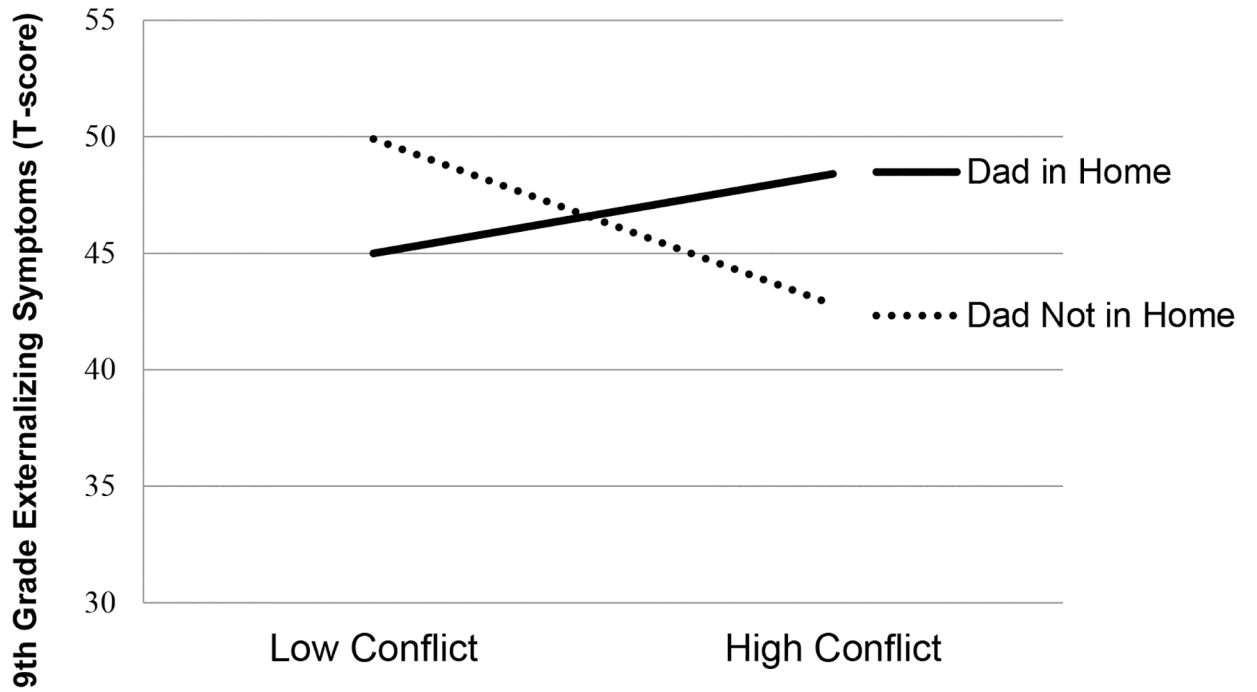


Figure 1. Significant conflict by father residential status interaction predicting 9th grade externalizing symptoms, controlling for 8th grade externalizing and 9th grade internalizing symptoms, sex, risk, years since divorce and maternal conflict.

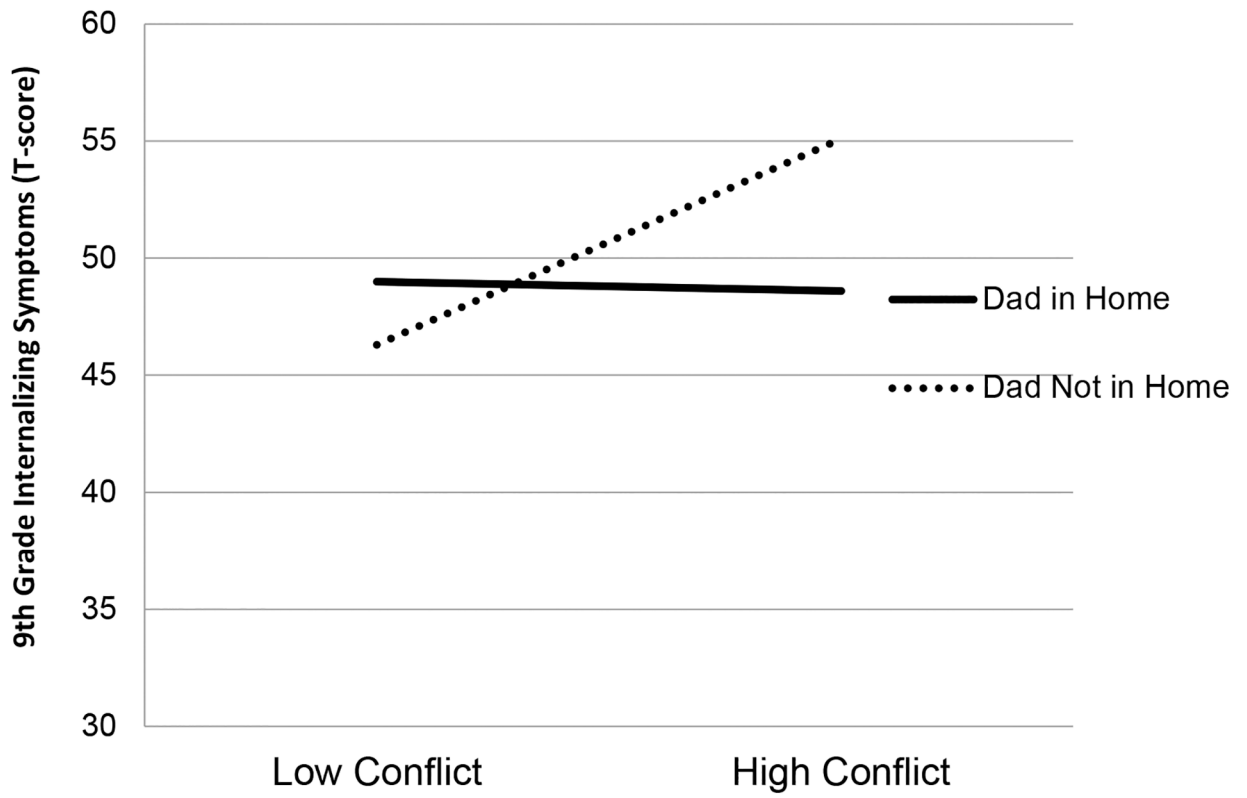


Figure 2. Significant conflict by father residential status interaction predicting 9th grade internalizing symptoms, controlling for 8th grade internalizing and 9th grade externalizing symptoms, sex, risk, years since divorce and maternal conflict.

Table 1

Demographic Information for Youth and Families with and without Residential Fathers

Variable	Residential Fathers (n =112) % M (SD)	Nonresidential Fathers (n = 34)% M (SD)
Sex (% Female)	51.8%	64.7%
Age, in years	13.47 (.57)	13.62 (.65)
Race of Child (% White) ^a	88.4%	73.5%
Family SES ^b	44.64 (11.53)	41.21 (11.20)
Maternal Occupation Code ^b	4.57 (2.74)	4.82 (2.47)
Maternal Education		
< high school education (%)	4.5%	11.8%
high school education (%)	33.9%	23.5%
> high school education (%)	61.6%	64.7%
Maternal Depression (%) ^c	63.4%	97.1%
Maternal Age ^d	37.97 (4.60)	37.65 (5.00)
Years Divorced, if divorced	9.55 (3.12)	8.29 (3.74)

^aContinuity correction chi-square marginally significant (3.22, $p = .07$).

^bSES and Occupation Codes utilized Hollingshead (1975) system.

^cContinuity correction chi-square = 12.83, $p < .001$

^dMaternal age collected at the study's beginning, when children were in the 6th grade.

Table 2

Descriptive Statistics and Correlations of the Measures

Variable	Mean/%	SD	2	3	4	5	6	7	8	9	10	11	12
1. Maternal depression (%) ^a	71.2%	---	.09	.45 ^{***}	.17 [*]	.11	-.31 ^{***}	.17 [*]	.17	.39 ^{***}	.21 [*]	.37 ^{***}	.30 ^{**}
2. Adolescent sex (% female) ^a	54.8%	---	-	.04	.05	.15	-.11	.07	.10	-.18 [*]	-.15	-.05	-.08
3. Years since divorce	3.83	4.97	-	-	.39 ^{***}	.11	-.50 ^{***}	.08	.09	.17 [*]	.03	.18 [*]	.08
4. Conflict with mother-8 th grade	3.42	4.51	-	-	-	.60 ^{***}	-.01	.25 ^{**}	.29 ^{**}	.25 ^{**}	.14	.30 ^{***}	.11
5. Conflict with mother-9 th grade	3.57	4.40	-	-	-	-.06	-.06	.24 ^{**}	.31 ^{***}	.19 [*]	.16 [*]	.30 ^{***}	.18 [*]
6. Father status (% in home) ^a	76.7%	---	-	-	-	-	-	.07	.03	-.11	.00	-.14	-.13
7. Conflict with father-8 th grade	3.88	5.18	-	-	-	-	-	-.81 ^{***}	.81 ^{***}	.21 [*]	.16	.26 ^{**}	.18 [*]
8. Conflict with father-9 th grade	4.08	5.11	-	-	-	-	-	-	-	.22 [*]	.26 ^{**}	.20 [*]	.14
9. Externalizing-8 th grade	49.27	10.77	-	-	-	-	-	-	-	-	.59 ^{***}	.76 ^{***}	.50 ^{***}
10. Internalizing-8 th grade	49.18	9.42	-	-	-	-	-	-	-	-	-	.41 ^{***}	.63 ^{***}
11. Externalizing-9 th grade	48.95	11.26	-	-	-	-	-	-	-	-	-	-	.60 ^{***}
12. Internalizing-9 th grade	48.66	9.39	-	-	-	-	-	-	-	-	-	-	-

Note. N = 146 for all variables except conflict with fathers and mothers in 9th grade (n = 127).

^aPhi coefficients and point-biserial correlations were used when correlating these variables with binary and continuous variables, respectively.

* p < .05.

** p < .01.

*** p < .001.

Hierarchical Multiple Regression Analyses to Predict 9th Grade Internalizing and Externalizing Symptoms

Table 3

Step and predictor	Dependent Variable					
	9 th Grade Externalizing Symptoms	9 th Grade Internalizing Symptoms	9 th Grade Internalizing Symptoms	9 th Grade Internalizing Symptoms		
	in R^2	B (SE)	β	in R^2	B (SE)	β
1. Covariates	.671***			.552***		
(constant)		-2.77(3.94)			8.50(3.82)	
Symptoms in 6 th grade		0.62(0.06)	0.60***		0.46(0.06)	0.46***
Comorbid Symptoms in 8 th grade		0.35(0.07)	.029***		0.35(.06)	.042***
Maternal Depression		0.78(1.49)	0.03		1.16(1.42)	0.06
Years since Divorce		-0.01(0.13)	-0.07		0.00(0.13)	0.00
Adolescent Gender		1.66(1.14)	0.07		0.13	0.01
Conflict with Mother		0.27(0.14)	0.11*		-0.09	-0.09
2. Main Effects	.003			.004		
Father Residential Status		-0.99(1.58)	-0.04		-1.81(1.53)	-0.08
Conflict with Father Figure		0.68(0.61)	0.06		0.13(0.60)	0.01
3. Fa. Conflict x Fa. Residential Status	.009*	3.07(1.53)	0.74*	.014*	-3.14(1.49)	-0.90*
Cumulative R^2	.683			.570		
Final $F(9,136)$	32.631***			20.066***		

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 4
Hierarchical Multiple Regression Analysis to Predict 9th Grade Father-Adolescent Conflict

Step and predictor	Sample Analyzed			
	Residential & Nonresidential Fathers ^a	Residential Fathers Only ^b	in R ²	β
1. Covariates	.663***	.632***		
(constant)	0.13(0.93)	0.49(1.06)		
Maternal Depression	0.36(0.65)	0.85(0.72)		0.08
Years since Divorce	-0.03(0.06)	-0.06(0.13)		-0.05
Adolescent Gender	0.24(0.55)	-0.09(0.64)		-0.01
Conflict with Mother-9 th grade	0.13(0.06)	0.19(0.08)		0.16*
Conflict with Father-8 th grade	0.79(0.06)	0.71(0.07)		0.71***
2. Main Effects	.010	.026 ^c		
Internalizing Symptoms-8 th grade	0.06(0.04)	0.10		0.15*
Externalizing Symptoms-8 th grade	0.00(0.03)	0.01		0.03
Father Residential Status or Type	0.02(0.81)	0.00		0.17
3. Interactions	.015	.013		
Internalizing x Externalizing	0.00(0.00)	0.19		0.08
Father Residential or Father Type x Internalizing	0.16(0.12)	1.04		0.23
Father Residential or Father Type x Externalizing	0.03(0.08)	0.22		0.54
Cumulative R ²	.688	.671		
Final $F(11,115)^a, (11,89)^b$	20.052***	16.499***		

^aRegression includes Father Residential Status in Step 2 and Step 3

^bRegression includes Type of Father (biological or step) in Step 2 and 3.

^cStep was marginally significant ($p < .08$).

* $p < .05$.

** $p < .01$.

*** $p < .001$.