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Parent-Child Relationships and Dyadic Friendship Experiences as Predictors of Behavior Problems in Early Adolescence

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This study focused on support and conflict in parent-child relationships and dyadic friendships as predictors of behavior problems in early adolescence (n = 182; M age = 12.9 years, 51% female, 45% African American, 74% two-parent homes). Support and conflict in one relationship context were hypothesized to moderate the effects of experiences in the other relationship context. Adolescent-reported antisocial behavior was low when either parent-child relationships or friendships were low in conflict, and adolescent-reported depressed mood was low when either friendship conflict was low or parental support was high. Parent-reported antisocial behavior was high when high levels of conflict were reported in either parent-child or friendship relationships and adolescent-reported depressed mood was high when either parental or friendship support was low. Associations appear to be similar for boys and girls as no interactions involving gender were significant.

Having good relationships with other individuals is of critical importance for mental health in childhood and later in life (Armsden & Greenberg, 1987; Tracy & Ainsworth, 1981). The affective nature of the parentchild relationship, as indicated by levels of acceptance, supportiveness, rejection, and conflict, has been found to have implications for adolescent's socio-emotional and behavioral adjustment. Low levels of acceptance and support and high levels of rejection and conflict have been linked to higher levels of externalizing problems, like aggression and antisocial behavior, as well as to higher levels of internalizing problems, such as depression and anxiety (Buehler & Gerard, 2002; Rohner & Britner, 2002; Rothbaum & Weisz, 1994). During late childhood and early adolescence, establishing and maintaining supportive friendships appears to have similar implications for adolescents' behavioral

adjustment (Hartup, 1996). Although the individual importance of parents and friends has been established (Khaleque & Rohner, 2002; Rubin, Bukowski, & Parker, 2006), less is known about how experiences in the two relationship contexts work together or interact in relation to adolescents' behavior problems. The present study examined the main effects and interactions between two affective experiences (i.e., support and conflict) in two types of dyadic relationships as predictors of behavior problems in early adolescence.

We focus on support and conflict as key affective dimensions of parent-child relationships and friendships. The distinction between these two dimensions is important, because although support and conflict are likely to be negatively correlated, experiencing low levels of support does not necessarily imply high levels of conflict, and low levels of conflict do not necessarily imply high levels of supportiveness. Previous research has found that perceived parental acceptance and supportiveness are related to higher self-esteem and social competence, and to lower rates of depression and behavior

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problems in adolescence (Kerns, Klepac, & Cole, 1996; Robertson & Simons, 1989; Rhoner & Britner, 2002). Similarly, friendships characterized as high in social support, help, and acceptance have been associated with lower levels of internalizing and externalizing problems in both (early) childhood and adolescence (Cohen & Wills, 1985; Hartup, 1996; Kupersmidt & Coie, 1990; Parker & Asher, 1993). Conversely, high levels of parent-child conflict and perceived parental rejection are associated with more aggression, hostility, and depression, and with a negative worldview (Buehler & Gerard, 2002; Khaleque & Rhoner, 2002; Sentse, Veenstra, Lindenberg, Verhulst, & Ormel, 2009). Likewise, conflict with friends is strongly associated with several forms of maladjustment in adolescence (Burk & Laursen, 2005). Although prior studies have shown that support and conflict in parent-child and peer relationships have great relevance for adolescents' behavioral adjustment, researchers have rarely considered both relationship contexts simultaneously.

Some (e.g., Bowlby, 1973) have argued that the nature of the relationship with the primary attachment figure is most important for mental health. Evidence attesting to the importance of high-quality relationships with parents mainly comes from research that focused on young children, but there is evidence that this influence remains strong in early adolescence (Steinberg, 2001). On the other hand, adolescents spend more time with their peers than with their parents and rely more on their peers for help solving problems (Agnew, 2003), suggesting that peers become the "socializing agents" during adolescence (Buehler, 2006; Fuligni & Eccles, 1993; Harris, 1995). Thus, early adolescence is an ideal developmental period to study the incremental contributions of parent–child relationships and friendships.

Many studies have focused on individual effects of parent-child or peer relationships or on additive main effects (e.g., Criss, Shaw, Moilanen, Hitchings, & Ingoldsby, 2009). However, experiences in a given relationship context may be important because the experiences contribute uniquely to predicting behavior problems after controlling for experiences in other contexts, or because the experiences moderate the impact of experiences in other contexts. The primary aim of the current study was to examine whether affective experiences in one relationship context moderate associations between behavior problems and experiences in the other relationship context. For example, if friendships function similarly to relationships with parents (i.e., serving as sources of intimacy, support, and aid; Furman & Buhrmester, 1985), then high-quality friendships may be able to buffer early adolescents from the anticipated negative effects of low-quality parent-child relationships (see also Criss, Pettit, Bates, Dodge, & Lapp, 2002; Patterson, Cohn, & Kao, 1989) and vice versa.

Evidence is available that positive characteristics of dyadic friendships can buffer negative experiences in the broader family environment. Specifically, Rubin et al. (2004) found that high friendship quality buffered the impact of low perceived maternal support on early adolescent internalizing problems (in girls) and social competence (in boys). Likewise, Gauze, Bukowski, Aquan-Assee, and Sippola (1996) showed that supportive friendships buffered the impact of low family cohesion and adaptability on adolescents' social competence and global self-worth. In addition, Lansford, Criss, Pettit, Dodge, and Bates (2003) showed that the positive association between parental decision making and externalizing behavior was less strong among adolescents with high-quality friendships.

Although several studies document that high-quality friendships can buffer children from experiencing the risks associated with negative family experiences, it is unclear whether a high-quality relationship with parents can buffer the potential negative ramifications of low-quality friendships in adolescence. There are some studies that document on the buffering role of parentchild relationships regarding effects of negative experiences in the broader peer group, although these findings are inconsistent. Patterson and colleagues (1989) reported that maternal warmth could buffer the association between experiencing peer rejection in school and acting out and having learning problems in young children. Another study, however, failed to find a buffering effect of parental acceptance in the relation between peer rejection and behavior problems in early adolescence (Sentse, Lindenberg, Omvlee, Ormel, & Veenstra, 2010). Yet, if friendships function similarly to relationships with parents and serve similarly as sources of intimacy, support, and aid (Furman & Buhrmester, 1985), then high-quality parent-child relationships should be able to buffer the impact of low-quality friendships.

It also remains unclear whether the moderating effects are different for boys and girls. From middle childhood on, girls place more emphasis on friendships than boys (Maccoby, 1998), and girls are more sensitive than boys to negative interpersonal communication and depression in general (Hankin & Abrahamson, 2001; Hale, Van Der Valk, Engels, & Meeus, 2005; Nolen-Hoeksema & Girgus, 1994). These gender differences suggest that gender may interact with relationship experiences. It is also known that base levels of externalizing and internalizing problems differ among the sexes, with girls being more prone to depression (Twenge & Nolen-Hoeksema, 2002) and boys being more likely to engage in externalizing behaviors (Broidy et al., 2003). Previous research on the interaction between family and peer relationship qualities either did not test for gender differences (Bolger, Patterson, & Kupersmidt, 1998; Criss et al., 2009; Lansford et al., 2003) or did not find gender differences (Criss et al., 2002; Gauze et al., 1996).

The current study extended previous research in four ways. First, we focused on positive and negative affective dimensions of dyadic relationships with parents and friends, and we tested for possible interactions between the relationship experiences. Second, we explicitly focused on dyadic friendship experiences, because they may be of greater importance with regard to their provision of intimacy, help, and support as compared to the larger peer group. Although some children may be more accepted by their peer group than others, even low-accepted children can have a supportive best friend (Parker & Asher, 1993). Third, we assessed experiences in relationships with parents and friends and adolescents' behavior problems following the transition into middle school while controlling for adolescents' behavior at an earlier time point. We did this because the transition from elementary to secondary school involves a change of school, which can bring a change in peer contexts and friendships (see Veenstra, Lindenberg, Verhulst, & Ormel, 2009). Finally, we tested for gender differences in all of these relations.

To summarize, in the current study we tested two affective experiences in dyadic relationships with parents and friends as potential predictors of externalizing (i.e., antisocial behavior) and internalizing (i.e., depressed mood) behavior problems. We hypothesized that a positive experience in one relationship context could buffer the association between negative experiences in the other relationship context and behavior problems (e.g., supportive friendships would buffer the effect of conflictual parent–child relationships). Last, we expected that girls would suffer more from low-quality interpersonal relationships than boys and that this pattern would be more pronounced for internalizing than externalizing behavior.

METHOD

Participants

Mother-adolescent dyads (n=218) completed home interviews in the summer following the early adolescent's fifth-grade school year (T1: Adolescent *M* age = 11 years 11 months, range = 10 years 7 months to 13 years 9 months; Mother *M* age = 39.6 years, range = 27-66 years). The sample was 51% female, and 73% of the adolescents lived in a two-parent home when the data were collected. Most of the adolescents were African American (50%) or European American, non-Hispanic (45%; 3% were Asian, and 1% were Hispanic). Mother education level varied with 2.8% not having completed high school, 10.1% having a high school diploma, 39.4% having attended college or technical school, 27.5% having a bachelor's degree, and 19.7% having a graduate degree. The demographic characteristics of the sample generally corresponded to those of the community and schools from which they were recruited. Specifically, Census 2000 data show that 68% of the households in the community with 6- to 17-year-old children were headed by married couples, and enrollment figures from the National Center for Educational Statistics indicate that the great majority of students in the schools are of European American (47.2%) or African American (49.6%) background.

The sample was reinterviewed 1 year later following the adolescents' first year in middle school. Eighty-four percent of the sample was retained (n = 182) at the post-sixth-grade (T2) interview. Attrition was primarily due to residential mobility. Ongoing participants did not differ from drop-outs on any of the T1 behavior measures described problem in this report, t(216)s = .17 to .85, ps = .87 to .40, or on any of parent-child relationship or friendship variables from T1, t(216)s = .09 to 1.39, ps = .93 to .17. Demographic characteristics for the retained sample were comparable to the full sample (51% female, 74% two-parent homes, 45% African American). Ongoing participants did not differ from dropouts in gender, $\chi^2(1) = .54$, p = .46, or single parent status, $\chi^2(1) = 1.68$, p = .19, but African American participants were more likely to drop out than other participants, $\chi^2(2) = 7.21$, p = .03.

Procedure

Following Institutional Review Board and school administrator approval, participating families were recruited from 20 elementary schools serving citizens of a midsized city in the southern United States. Information letters were distributed by research assistants in fifth grade classrooms during the spring of 2006 and 2007. Interested parents returned a postcard to the principal investigator (in 2006) or a form to the adolescents' school (in 2007) indicating their willingness to participate and were contacted to schedule a home interview. Postcards or forms were returned by 20% of the fifth-grade students enrolled in the schools and interviews were completed with 94% of the families we contacted via telephone.

Home-based interviews were conducted with mothers and adolescents. Mothers and adolescents were provided an overview of the interview procedure before mothers provided consent and adolescents provided assent. Following the consent discussion, adolescents and mothers were interviewed in separate locations within the home. The interviews took about 45 min. Interviewers read questions aloud and mothers and adolescents recorded their responses to the questions on an answer sheet. Participants were compensated \$25 and \$35 for participating in the T1 and T2 interviews, respectively.

Measures

Mood and behavior problems. Adolescents reported the frequency of their involvement in antisocial behavior using 26 items from the Problem Behavior Frequency Scale (Farrell, Kung, White, & Valois, 2000) and 6 items from the Teen Conflict Survey (Bosworth & Espelage, 1995). Together these items assessed the frequency of rule-breaking behavior at home, school, and in the community, physical and nonphysical aggression, delinquency, and drug use during the last month of the school year. Farrell et al. (2000) reported a confirmatory factor analysis showing that the a model specifying a higher order antisocial behavior factor with first-order drug use, delinquency, and aggression factors provided a good fit to the Problem Behavior Frequency Scale items. Bosworth and Espelage (1995) reported acceptable internal consistency for the Teen Conflict Survey $(\alpha = .79)$ in a middle school sample. Each item was scored on a 5-point scale from 0 (never) to 4 (7 or more times). The mean of the 32 items was computed to index adolescent-reported antisocial behavior ($\alpha = .91$ at T1, $\alpha = .93$ at T2). Parents also reported the antisocial behavior of their adolescents using a modified version of the Teen Conflict Survey (e.g., "In the last month of school, how many times did your son or daughter break a rule at school?"). Parents responded using a 5-point modified frequency scale from 0 (never) to 4 (7 or more times). The mean of the six items was computed to index parent-reported antisocial behavior ($\alpha = .77$ at T1, $\alpha = .80$ at T2). Adolescent-reported and parent-reported antisocial behavior scores were log-transformed prior to analyses to address modest skew and kurtosis.

Adolescents reported their depressed mood using the six-item (e.g., "In the last month, how often were you very sad?") Modified Depression Scale (Orpinas, 1993). Orpinas (1993) reported acceptable internal consistency for the six items ($\alpha = .73$) in a sample ranging in age from 10 to 18. Each item was scored on a 5-point scale from 0 (*never*) to 4 (*always*). The mean of the six items was computed to index adolescent-reported depressed mood ($\alpha = .75$ at T1, $\alpha = .74$ at T2). Parents reported the depressed mood of their child using the same six items (e.g., "In the last month, how often was your son or daughter very sad?"), with the mean of the items computed to index parent-reported depressed mood ($\alpha = .75$ at T2). All depressed mood scores appeared to be normally distributed (skew <.9 and kurtosis <1.7).

Parent-child relationship experiences. Items used to measure parents' support (T2) were taken from the

Children's Report of Parental Behavior Inventory (Schaefer, 1965; Schludermann & Schludermann, 1988). Schaefer (1965) reported acceptable internal consistency and provided evidence to support the concurrent validity for the Children's Report of Parental Behavior Inventory. The items are consistent with our conceptualization of acceptance, warmth, and support as evidence of parental support. Fourteen items from the Parental Acceptance subscale were used to measure support provided by parents. Adolescents reported how much these items reflect their mother's behavior on a 5-point scale from *not at all like her* to *a lot like her*. An example item is, "My mother tells me she loves me." The mean of the 14 items was computed to index parental *support* ($\alpha = .93$).

A measure of parent-adolescent conflict (T2) was modeled on Robin and Foster's (1989) assessment and weights the amount of negative affect by the frequency of conflict across 10 issues. Evidence to support the discriminant and construct validity of this conflict measure was provided by Buehler and Gerard (2002). Five of Robin and Foster's 44 original items were found to be the most frequent or intense sources of conflict during pilot testing (i.e., cleaning your room, talking back to parents, lying, volume on TV too loud, and getting in trouble at school) and conflict scores computed using the 5-item subset were very strongly correlated with scores computed using the full 44-item assessment (r > .90). To minimize the length of the interview, the 5-item subset was combined with 5 items specifically developed to assess paren-child conflict regarding peer relationships and unsupervised time (how time is spent with friends, free time spending, unsupervised time spending, TV shows that are being watched or music that is being listened to, and hanging out with friends that parents do not like) to better address the goals of the larger project for which these data were collected. For each item, adolescents reported the frequency of conversation during the past 4 weeks using a 3-point scale from 0 (never) to 2 (lots of times). For items that were discussed, adolescents also responded to a question assessing the anger expressed during the discussions using a 3-point scale from 0 (*calm*) to 2 (*very angry*). Following Robin and Foster's (1989) scoring procedure, the frequency and anger scores were multiplied for each item. A parent-adolescent conflict composite score was computed as the mean of the 10 items ($\alpha = .73$). Higher conflict scores indicate more frequent and intense conflict.

Friendship experiences. Support and conflict with participants' current best friend were measured at T2 using selected items from the Friendship Quality Scale (Bukowski, Hoza, & Boivin, 1994). Bukowski et al.

(1994) reported evidence to support the criterion validity for the Friendship Quality Scale, and Laird, Pettit, Dodge, and Bates (1999) demonstrated acceptable internal consistency and predictive validity. To minimize the length of the interview, the three highest loading items from each of the Help, Security, and Closeness subscales were used to assess support provided by the best friend (e.g., "If other kids were bothering me, my friend would help me") and the four highest loading items from the Conflict subscale were used to assess conflict with friends (e.g., "I can get into fights with my friend"). During the interviews, adolescents were told that the next set of items asked about their best friend. If adolescents reported that they did not have a best friend, they were instructed to skip the questions. If adolescents reported that they had multiple best friends, they were instructed to think about the "best of the best friends" when answering the questions. Only 1 participant skipped the best friend questions. Adolescents responded to the questions about their current best friend on a 5-point scale from never to always. An index for friendship support was computed from the mean of the nine support items ($\alpha = .91$) and an index of friendship conflict was computed as the mean of the four conflict items ($\alpha = .73$).

Data Analyses

Gender differences in the variables were examined using t tests. Bivariate associations between all variables involved in the present study were tested using Pearson correlations. Multiple linear regression analyses were used to test the associations between relationships with parents and friends and behavior problems in early adolescence (T2), whereas controlling for earlier behavior problems (T1) and gender. All main effects and interaction terms were entered simultaneously. We included

two types of interactions: cross-context (two-way) interactions between the relationship variables and gender (two-way and three-way) interactions between the relationship variables and gender. All analyses were conducted separately for antisocial behavior and depressed mood. To ease the interpretation of the coefficients, all continuous variables were standardized to M = 0 and SD = 1 prior to the analyses and before interaction terms were computed. To facilitate interpretation of the interaction effects, simple slopes were calculated with low and high levels of the predictors indicating 1 SD below and above the mean, respectively, while holding all other variables to their sample means (Aiken & West, 1991). Given the standardization procedure, main effect betas can be interpreted as the effect at mean levels of all other variables in the analysis and interaction term betas indicate the change in the in the main effect beta at +1 SD above the mean on the moderator.

RESULTS

Descriptive Statistics

Table 1 contains the means and standard deviations of the parent-child and friendship variables (before they were standardized) and the problem behavior variables (before the log transformations). *T* tests showed that there were significant gender differences for four variables. Compared to girls, boys had higher levels of both adolescent-reported and parent-reported antisocial behavior at T1 and T2, ts(180) = -3.01 to -2.19, all ps < .05, and higher levels of parent-reported depressed mood at T2, t(180) = -2.26, p < .05. Compared to boys, girls reported higher levels of parental support, t(178) = 2.30, p < .05, and friendship support, t(179) = 6.08, p < .01.

The correlations between the variables were all in the expected direction, but not all of them were significant.

TABLE 1 Descriptive Statistics and Correlations Among Main Study Variables

Variable	М	SD	1	2	3	4	5	6	7	8	9	10	11
1. AR Antisocial T1	1.51	.49											
2. AR Antisocial T2	1.43	.45	.68***										
3. PR Antisocial T1	1.82	.59	.29***	.17*									
4. PR Antisocial T2	1.77	.60	.31***	.35***	.66***								
5. AR Depression T1	2.61	.83	.46***	.30***	.08	.12							
6. AR Depression T2	2.50	.75	.36***	.38***	.07	.17*	.50***						
7. PR Depression T1	2.04	.58	.13	.01	.30***	.29***	.14	.15*					
8. PR Depression T2	2.11	.58	.21**	.19*	.25***	.35***	.05	.24***	.49***				
9. Parental Support	4.14	.80	26***	29***	13	13	23**	33***	12	16*			
10. PC. Conflict	3.34	1.16	.33***	.31***	.16*	.26***	.32	.37***	.12	.19*	20**		
11. F. Support	4.23	.72	12	10	13	18^{*}	07	16*	11	11	.34***	03	
12. F. Conflict	2.54	.88	.29***	.38***	.10	.26***	.11	.14	.14	.13	01	03	17^{*}

Note. AR = adolescent-reported; PR = parent-reported; P–C = parent-child; F = Friendship. *p < .05. **p < .01. **p < .001.

with less Parental support was associated adolescent-reported antisocial behavior and depressed mood at both time points. Parent-adolescent conflict was associated with more adolescent-reported and parent-reported antisocial behavior at both time points and with more adolescent- and parent-reported depressed mood at Time 2. Friendship support was associated with less parent-reported antisocial behavior and with less adolescent-reported depressed mood at Time 2. Friendship conflict was associated with more adolescent-reported antisocial behavior at both time points and with more parent-reported antisocial behavior at Time 2. Thus, when tested individually, each relationship quality was associated with one or both types of behavior problems in the expected directions. More parental support was associated with more friendship support, but parent-child relationship conflict was not associated with friendship conflict or support. Antisocial behavior and depressed mood were quite stable and correlated highly with each other within informant over the two waves. Adolescent and parents reports of antisocial behavior and depressed mood were only modestly associated. Therefore, multivariate analyses were conducted separately for each informant.

Regression Analyses

Table 2 presents the standardized regression coefficients for all variables in the regression analyses, for antisocial

behavior and depressed mood separately. We also tested interactions between gender and all the predictors. None of the two-way or three-way interactions with gender were significant, and therefore the interactions were not included in the final analyses and are not reported in the tables.

Antisocial behavior. The left side of Table 2 shows the unique effects of the parent-child relationship and friendship measures and their interactions as predictors of early adolescent antisocial behavior. After controlling for antisocial behavior at T1 and gender, more parental support was associated with less adolescent-reported antisocial behavior. Friendship support was not associated with adolescent-reported or parent-reported antisocial behavior. The main effects of parent-child and friendship conflict were qualified by significant Parent– Child Conflict × Friendship Conflict interactions for both adolescent-reported and parent-reported antisocial behavior.

For adolescent-reported antisocial behavior (see Figure 1), the symmetrical interaction indicates that low levels of friendship conflict buffer the positive association between parent-child conflict and antisocial behavior, and likewise that low levels of parent-child conflict buffer the positive association between friendship conflict and antisocial behavior. Simple slopes indicate that conflict with parents was associated with more

TABLE 2								
Early Adolescent Antisocial Behavior and Depressed Mood Regressed on Control Variables, Parent-Child Relationship,								
and Friendship Characteristics								

		ehavior T2	Depressed Mood T2					
	Adolescent-	Reported ^a	Parent-Re	eported ^b	Adolescent-Reported ^c		Parent-Reported ^d	
Predictor	B (SE)	β	B (SE)	β	B (SE)	β	B (SE)	β
Controls								
Antisocial Behavior T1	.07 (.06)	.51***	.56 (.06)	.57***				
Depressed Mood T1					.36 (.06)	.39***	.46 (.07)	.46***
Gender (being a boy)	.03 (.03)	.05	.05 (.04)	.08	07 (.10)	05	.16 (.08)	.14
Parent-Child Relationship								
Parental Support	04 (.02)	17**	.01 (.02)	.02	12 (.05)	16^{*}	04 (.04)	07
Parent-Child Conflict	.03 (.02)	.12*	.05 (.02)	.17**	.15 (.05)	.20**	.07 (.04)	.13
Friendship								
Friendship Support	.02 (.02)	.08	03 (.02)	09	13 (.06)	17^{*}	02 (.05)	03
Friendship Conflict	.06 (.02)	.24***	.05 (.02)	.15*	.03 (.05)	.04	.01 (.04)	.02
Interactions								
Parental Support × Friendship Support	01 (.02)	01	02 (.02)	08	12 (.05)	15*	07 (.04)	12
Parent-Child Conflict × Friendship Conflict	.03 (.02)	.11*	04 (.02)	12*	08 (.05)	10	01 (.04)	02
Parental Support × Friendship Conflict	01 (.02)	03	01 (.02)	02	13 (.05)	16**	06 (.04)	10
Parent–Child Conflict × Friendship Support	01(.02)	03	03(.02)	07	03 (.06)	03	07 (.05)	10

 ${}^{a}R^{2} = .53^{***}.$

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

 $^{{}^{}b}R^{2} = .49^{***}.$

 $^{^{}c}R^{2} = .40^{***}.$

 $^{{}^{}d}R^{2} = .31^{***}.$

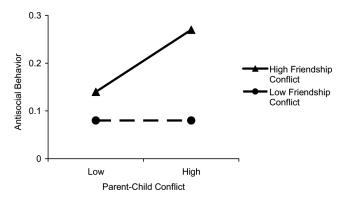


FIGURE 1 The interaction between parent–child conflict and friendship conflict in predicting adolescent-reported antisocial behavior.

antisocial behavior for early adolescents high on friendship conflict (b = .06, SE = .01, p = .05) but not for those low on friendship conflict (b = .01, SE = .01, p = .92). Likewise, friendship conflict was more strongly associated with antisocial behavior for adolescents high in parent-child conflict (b = .09, SE = .01, p = .003) than for adolescents low in parent-child conflict (b = .03, SE = .01, p = .001).

parent-reported antisocial For behavior (see Figure 2), the symmetrical interaction indicates that neither low levels of parent-child conflict nor low levels friendship conflict buffer the effects of high levels of conflict in the other relationship context; high levels of antisocial behavior were found for adolescents reporting high levels of conflict in either relationship. Simple slopes indicate that conflict with parents was associated with more antisocial behavior for adolescents low on friendship conflict (b = .09, SE = .01, p < .001) but not high on friendship conflict (b = .02, SE = .01, p = .14). Likewise, friendship conflict was associated with more antisocial behavior for adolescents low on parent-child conflict (b = .08, SE = .01, p < .001) but not high on parent-child conflict (b = .01, SE = .01, p = .48).



FIGURE 2 The interaction between parent-child conflict and friendship conflict in predicting parent-reported antisocial behavior.

Depressed mood. The right side of Table 2 shows the unique effects of the parent-child relationship and friendship measures and their interactions when predicting early adolescent depressed mood. After controlling for depressed mood at T1 and gender, more parentchild conflict was associated with higher levels of adolescent-reported depressed mood at T2. The main effects of parental support and friendship support were qualified by significant Parental Support × Friendship Support and Parental Support × Friendship Conflict interactions.

For the Parent Support × Friendship Support interaction (see Figure 3), the symmetrical interaction indicates that neither high levels of parental support nor high levels friendship support buffer the effects of low levels of support in other relationship context; low levels of depressed mood were found only for adolescents reporting high levels of both parental and friendship support. Simple slopes showed that more friendship support was associated with less depressed mood for early adolescents high on parental support (b = -.25,SE = .06, p < .001) but not for those low on parental support (b = -.01, SE = .06, p = .83). Likewise, parental support was associated with less depressed mood for early adolescents high on friendship support (b = -.24, SE = .07, p < .001) but not for those low on friendship support (b = -.01, SE = .07, p = .93).

For the Parental Support × Friendship Conflict interaction (see Figure 4), parental support buffered the positive association between friendship conflict and depressed mood, and low friendship conflict buffered the negative association between parental support and depressed mood. Simple slopes showed that parental support was more strongly associated with depressed mood for adolescents high in friendship quality (b =-.25, SE = .05, p < .001) than for adolescents low in friendship quality (b = .01, SE = .05, p = .94). Likewise, conflict with friends was associated with more depressed mood for early adolescents low on parental support

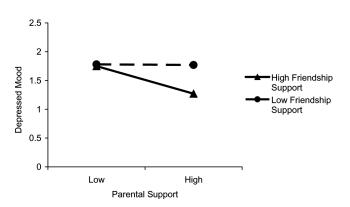


FIGURE 3 The interaction between parental support and friendship support in predicting adolescent-reported depressed mood.

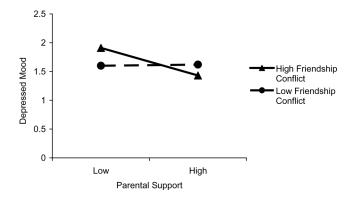


FIGURE 4 The interaction between parental support and friendship conflict in predicting adolescent-reported depressed mood.

(b = .16, SE = .06, p = .02) but not for those high on parental support (b = -.10, SE = .06, p = .13). Although, there were no significant predictors of parent-reported depressed mood, marginal effects for parent-child conflict (p = .07), and the Parental Support × Friendship Support interaction (p = .09) were consistent with the results for adolescent-reported depressed mood.

DISCUSSION

The purpose of the current study was to test support and conflict in the parent-child relationship and support and conflict in dyadic friendships as predictors of behavior problems in early adolescence. Findings suggest that characteristics of relationships with parents and friends both contribute to the prediction of adolescents antisocial behavior and depressed mood and that the potential effects of experiences in one relationship context can be moderated by experiences in the other. The support and conflict dimensions of parent-child relationships and friendships contributed incrementally to adolescent-reported and parent-reported antisocial behavior and adolescent-reported depressed mood through a combination of main effects and interactions. Two interactions suggest that positive experiences in one relationship context can offset negative experiences in the other relationship context. Specifically, adolescentreported antisocial behavior was low as long as either parent-child relationships or friendships were low in conflict. Adolescent-reported depressed mood was low as long as either friendship conflict was low or parental support was high. Two other interactions revealed patterns inconsistent with buffering effects. High levels of conflict in either parent-child or friendship relationships were linked to higher levels of parent-reported antisocial behavior and low levels of either parental or friendship support were linked to higher levels of adolescent-reported depressed mood. Associations appear to be similar for boys and girls, as gender did not moderate any of the effects.

Relationship experiences may contribute to the prediction of behavior problems through either unconditional or conditional effects. Although there has been speculation regarding whether the parent-child or friendship context is of greater importance in adolescence (see, e.g., Harris, 1995), such speculation has emphasized main effects. Our results found little evidence of main effects that were not moderated by experiences in the other relationship domain. Specifically, the only unconditional main effect identified in the current study was between parental support and adolescent-r eported antisocial behavior. When the interplay between the two contexts is considered, parent-child relationships and friendships both appear to be important correlates of internalizing and externalizing behavior problems. This finding is in concordance with a study by Criss et al. (2009) in which they concluded that family and peer relationships are incrementally related to antisocial behavior in adolescence. Criss et al. (2009) argued that this may indicate that relationships with parents and friends provide unique socialization and learning experiences. However, our results are more consistent with the notion that experiences in one relationship domain can be offset by experiences in the other and that the two relationship contexts provide complimentary rather than unique experiences.

Before considering the nature of the interplay between the two contexts, it is important to note that the broader pattern of associations is consistent with previous studies showing that more support from parents and friends is associated with better behavioral and emotional adjustment and that more conflict with parents and friends is associated with worse behavioral adjustment (e.g., Buehler & Gerard, 2002; Burk & Laursen, 2005; Hartup, 1996; Rohner & Britner, 2002). None of the interactions revealed any context in which more support was associated with more internalizing or externalizing problems or any context in which more conflict was associated with less internalizing or externalizing problems. Thus, although results suggest that the effect of experiences in one relationship context can be diminished or nullified by experiences in the other context, results do not indicate that experiences generally presumed to promote behavior problems can be made to prevent behavior problems by experiences in the other context.

Two interactions suggest that a negative experience in either relationship context was linked to higher levels of behavior problems and was not buffered by positive experiences in the other context. Specifically, we found that low levels of support from either parents or friends were linked with higher levels of adolescent-reported depressed mood. In other words, depressed mood was low only among adolescents experiencing highly supportive relationships with both parents and friends. We also found a similar interaction effect for conflict in the two relationship contexts. Parents reported higher levels of antisocial behavior when adolescents had high-conflict relationships with either parents or friends. Again, conflict in either relationship was linked with more antisocial behavior. Antisocial behavior was not higher if there were high levels of conflict in both relationship and antisocial behavior was not lower if there were low levels of conflict in one relationship. These findings are in line with a study by Laible, Carlo, and Raffaelli (2000), concluding that adolescents high on both parent and peer attachment were the most well adjusted.

Two other interactions suggest that a negative experience in one relationship context can be buffered by positive experiences in the other. Most studies have focused on friendships or peer relationships as buffers of negative family experiences rather than parent-child relationships as a potential buffer for negative peer relationship experiences. In the current study we also explicitly tested whether the effects of negative relationship experiences with friends can be buffered by positive relationship experiences with parents. We found that the interaction between levels of conflict in the two relationship contexts was symmetrical, such that high levels of conflict with peers were only linked to adolescent-reported antisocial behavior when there were also high levels of conflict with parents. In other words, low levels of parent-child conflict offset high levels of friendship conflict. This implies that friendships can compensate for some aspects of the parent-child relationship and is in line with findings from studies on the moderating role of friends, or peers in general (Criss et al., 2002; Lansford et al., 2003; Sentse et al., 2010). Furthermore, we found that more friendship conflict was related to higher levels of depressed mood for adolescents with parents low in support but not for those high on parental support, again indicating that positive experiences in the parent-child relationship offset negative friendship experiences. This finding is in line with results from a study of young children showing that maternal warmth could buffer the association between experiencing peer rejection in school and acting out and having learning problems (Patterson et al., 1989). Results from the current study suggest that future research focusing on risk-buffering roles of the parent and peer context may be useful for intervention and prevention policies regarding adolescents' maladjustment. Again, these findings provide evidence for the more general notion that relationships with parents and friends can serve as similar sources for the provision of support, meaning that a lack of support in one context can be buffered by experiencing support in the other context.

When results from the current study are compared with results of a recent study by Sentse et al. (2010), which focused on the interaction between parental and peer acceptance and rejection, we note some important differences. Most important, Sentse et al. (2010) found that peer acceptance buffered the positive association between parental rejection and externalizing and internalizing problems in early adolescence, but there was no evidence for positive parent-child relationships buffering negative peer relations. In the present study we found some evidence for the latter. The reason for this difference may be that the present study focused on dyadic relationships with friends, whereas the previous study focused on the larger peer group. Dyadic friendships may serve comparable functions (e.g., help, support) to relationships with parents as implied by our findings. Similar functions may not be provided by relationships within the larger peer group. Being rejected by the larger peer group might not be comparable to negative experiences in dyadic friendships and thus may not be overcome by positive experiences in parent-child relationships. This possibility, however, awaits more research that explicitly focuses on the buffering role of positive parent-child relationships in the association between negative peer relationship experiences and child and adolescent mental health.

Strengths and Limitations

The current study has several strengths as compared to previous research, such as the focus on both additive and interactive effects of relationships with parents and friends, the focus on dyadic relationships with comparable indicators for positive and negative relationship experiences, and the consideration of both externalizing and internalizing behaviors across multiple informants while controlling for stability in these outcomes. In reviewing the findings of the present study, however, some limitations should be considered.

First, our measures for characteristics of the dyadic relationship with parents referred to the mother-child relationship only and not to father-child relationships. Previous research indicates that father-child and mother-child relationships have comparable effects on children's adjustment (for a review, see Phares & Compas, 1992). Therefore, future research on parent-child relationships and friendships might do well to focus on relationships with both mothers and fathers. Second, findings were not entirely consistent across adolescentreported and parent-reported behavior problems. Each informant perceives problem behavior in different contexts and differences between informants can be meaningful (Kraemer et al., 2003; Noordhof, Oldehinkel, Verhulst, & Ormel, 2008). Much of adolescents' involvement in antisocial behavior may be hidden from parents,

and thus the fact that results largely generalized across parent and adolescent reports of antisocial behavior indicates that findings are not due entirely to informant bias. In contrast, significant findings for depressed mood are limited to adolescents' reports. It is well recognized that parents' have more difficulty reporting children's internalizing problems than children's externalizing problems (Achenbach, McConaughy, & Howell, 1987). Nonetheless, findings with respect to depressed mood should be viewed with more skepticism as we cannot rule out the possibility that such findings are due to method bias or adolescents' unique perspectives on their own depressed moods.

Third, adolescents reported their perceptions of both the parent-child relationship and their dyadic friendships, which gave us an idea of the incremental contribution of each relationship context. Although comparable, the concepts were not identically measured, which could have contributed to the differential impact of both relationship contexts. Fourth, our sample was recruited from a single geographic region. Although the sample includes both sexes and the demographic characteristics generally reflect the geographic area from which the sample was recruited, well-educated parents and two-parent families are overrepresented in the data set and the convenience sample is likely biased by the desire to collect data through personal interviews in the participants' homes. Finally, although we took into account 1-year stability in antisocial behavior and depressed mood, we cannot rule out reversed causality, because the predictors were taken from the second wave interview. We elected to use relationship reports from T2 because children transitioned from elementary to secondary school in between the T1 and T2 interviews and it is likely that their friendships may have changed as well.

Implications for Research, Policy, and Practice

The results of this study have implications both for future research and practical application. First, the current study shows that experiences in the friendship context and parental context are interdependent. That is, experiences in the two contexts interact and effects are moderated by one other. Although previous studies focusing on the main effects of parent-child conflict or friendship quality are informative for detecting risk and protective factors for child and adolescent maladjustment, some important information is missing when possible interactions are ignored. That is, risk factors and protective factors may interact, providing the conditions under which a factor is more or less likely to be risky or protective. Thus, future research into child and adolescent maladjustment should focus on interactions involving additional relationship contexts, because some relationship contexts such as friendships and romantic partners may become relatively more important with increasing age (see Lonardo, Giordano, Longmore, & Manning, 2008).

Second, our findings support a more integrated approach to intervention. Children's problem behavior should be approached in the combined contexts of family and friends. For instance, social skills enhancement programs and school support and counseling should explicitly include students' friends and friendships as part of the interventions, as findings show that supportive friendship can buffer the negative effects of family experiences. Multisystemic treatment is an example of an intervention that focuses on both the family and peer relationship context. This family-based approach to problem behavior intervention targets individual, family, and peer factors, among others, and was found to be effective in reducing emotional and behavioral problems, in improving parent-child relations, and in decreasing youth aggression toward peers and involvement with deviant peers (Curtis, Ronan, & Borduin, 2004). Moreover, consistent with a strengths orientation, our findings suggest that identifying and building on supportive relationships, whether with parents or peers, can provide a buffer from difficulties in other relationships. This may be particularly important during the early adolescent period when the parent-child relationships may be restructured and many adolescents are simultaneously undergoing school transitions and are experiencing biological changes related to puberty (Agnew, 2003).

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