©American Psychological Association, 2012. This paper is not the copy of record and may not exactly replicate the authoritative document published in the APA journal. The final article is available, upon publication, at: https://doi.org/10.1037/a0029868

Published in final edited form as:

JFam Psychol. 2012 October; 26(5): 776–783. doi:10.1037/a0029868.

Tipping Points in Adolescent Adjustment: Predicting Social Functioning from Adolescents' Conflict with Parents and Friends

Katherine B. Ehrlich.

Department of Psychology, University of Maryland

Matthew J. Dykas, and

Department of Psychology, State University of New York at Oswego

Jude Cassidy

Department of Psychology, University of Maryland

Abstract

Despite widespread interest in examining the role of conflict for adolescent development, researchers only rarely have examined adolescents' experiences of conflict across relationships. The present study examined how adolescents' experiences of conflict with parents and friends were linked to their social functioning. Adolescents (n = 189) and their mothers and fathers participated in semi-structured discussions about areas of adolescent-parent conflict in the laboratory. In addition, adolescents reported about conflict in their best friendships, and peers reported about adolescents' social acceptance and behavior in social settings. Parent-adolescent conflict was associated with peer-reported aggression and delinquency, and friendship conflict was associated with delinquency and prosocial behavior. In addition, significant Parent-Adolescent Conflict × Friend-Adolescent Conflict interactions revealed that parent-adolescent conflict was associated with poor social functioning only when conflict with best friends was also high. The findings suggest that consideration of conflict across relationships may yield insight into the specific contexts in which conflict is associated with negative outcomes for adolescents.

Keywords

parent-adolescent conflict; adolescent friendships; social adjustment

Connections between family and peer experiences have long been of interest to both researchers and clinicians because the links between these "two social worlds" are widely viewed as intricate and important for children and adolescents' social and emotional health (Kerns, Contreras, & Neal-Barnett, 2000; Hartup, 1979; Parke & Ladd, 1992). Research examining parent-child relationships, for example, suggests that children and adolescents who have warm and supportive parents are more likely to have positive peer-related outcomes (e.g., greater peer acceptance and reciprocal friendships; see Brown, Mounts, Lamborn, & Steinberg, 1993; Steinberg, Mounts, Lamborn, & Dornbusch, 1991). Negative family environments, in contrast, characterized by hostile interactions and low parental involvement, have been linked to poor peer-related outcomes (e.g., peer rejection, social

Correspondence should be addressed to Katherine B. Ehrlich, Department of Psychology, University of Maryland, College Park, MD 20742, ehrlichk@umd.edu

Portions of this research were presented at the 2011 Biennial Meetings of the Society for Research in Child Development, Montreal, Canada.

withdrawal, antisocial behavior; see Fletcher, Steinberg, & Williams-Wheeler, 2004; Pettit, Bates, Dodge, & Meece, 1999). Yet, despite a variety of studies examining the links between experiences with family to those with peers, the complex ways in which family-and peer-related experiences contribute to adolescents' social functioning are still not well understood (Ladd & Pettit, 2002). It is not clear, for example, how adolescents' ongoing relationships with parents and friends contribute to their social adjustment in the broader peer group. For decades, calls have been made to consider relationships within the context of other relationships (e.g., Bronfenbrenner, 1988), yet surprisingly little research has directly addressed this issue (but see Sentse & Laird, 2010, for a notable exception).

Conflict between adolescents and parents is one aspect of the family environment that is thought to relate to the quality of adolescents' social functioning. Although increases in conflict from childhood to adolescence are generally viewed as normative and may reflect transitions in negotiating and communicating in the parent-adolescent relationship (e.g., Grotevant, 1998; Holmbeck, 1996; Smetana, 1996), converging evidence suggests that relatively high levels of parent-adolescent conflict can be maladaptive for adolescents' social functioning. For example, several cross-sectional and longitudinal studies have identified links between parent-adolescent conflict and negative peer outcomes, such as aggression and social isolation, as well with greater involvement in deviant peer groups (e.g., Ingoldsby, Shaw, Winslow, Schonberg, Gilliom, & Criss, 2006; Paley, Conger, & Harold, 2000). However, despite evidence for direct links between parent-adolescent conflict and peer outcomes, the effects of parent-adolescent conflict may not be the same for all adolescents. Adams and Laursen (2007), for example, reported that increases in parentadolescent conflict frequency were associated with greater delinquency and withdrawal only for adolescents who reported high levels of negativity in the parent-adolescent relationship. For adolescents whose relationships were low in negativity, an increase in conflict frequency from low to moderate levels was not associated with maladjustment. Similarly, in another study, the link between mother-adolescent conflict and adolescent deviant behavior was buffered by maternal warmth and acceptance (Galambos, Sears, Almeida, & Kolaric, 1995). Thus, parent-adolescent conflict may be related to adolescents' social relationships only in certain contexts or only for certain adolescents.

Of course, when adolescents are not with their parents, many spend their time in the company of friends, and conflict inevitably emerges in these relationship contexts as well. Indeed, adolescents report engaging in at least one disagreement with close friends every day (in contrast to three to four daily disagreements with parents; Laursen & Collins, 1994). Higher levels of conflict in friendships have been linked to greater loneliness (Ladd, Kochenderfer, & Coleman, 1996; Parker & Asher, 1993) and greater aggression (Adams & Laursen, 2007; see also Burke & Laursen, 2005, for similar findings). However, similar to studies of parent-adolescent conflict, several studies have failed to find connections between conflict between friends and various indicators of adolescents' social adjustment (e.g., Demir & Urberg, 2004). Thus, an important next step in studying conflict in adolescents' friendships is to examine the specific contexts in which conflictual friendships are associated with poor social adjustment.

The Present Study

The present study was designed to consider adolescents' experiences of conflict within and outside the family, and how such experiences may be associated with adolescents' social functioning. We examined peer reports of adolescents' social acceptance and social behaviors, including prosocial, aggressive, and delinquent behaviors, in order to capture a comprehensive assessment of adolescents' success in navigating relationships with peers, which is an essential component of competent socio-emotional functioning (Parker & Asher,

1987). We examined several conceptual models describing how conflict across relationship contexts may be associated with adolescents' social functioning. In light of evidence that adolescent girls and boys differ in their experiences of conflict with parents (e.g., Allison & Schultz, 2004) and friends (e.g., Chung, Flook, & Fuligni, 2011), we explored the role of adolescent sex in relation to interpersonal conflict and social functioning. Moreover, some evidence suggests that, compared to boys, girls are more adversely affected by interpersonal discord with parents and peers (e.g., Almeida & Kessler, 1998; Chung, Flook, & Fuligni, 2009; Flook, 2011; Noakes & Rinaldi, 2006). As such, we hypothesized that sex differences would emerge in the extent to which interpersonal conflict is associated with poor social functioning. Specifically, we expected that connections between interpersonal conflict and social functioning would be stronger for girls than for boys.

The first model we examined focused on the ways in which parent-adolescent conflict and friendship conflict were independently associated with adolescent social functioning. It is possible that one or both types of conflict may be associated with adolescent social adjustment, especially in light of the fact that adolescents' experiences of conflict with parents and friends are only modestly correlated (e.g., Sentse & Laird, 2010; Van Doorn, Branje, VanderValk, De Goede, & Meeus, 2011). We hypothesized that observed parent-adolescent conflict would be negatively associated with peer-reported social acceptance and prosocial behavior, and positively associated with peer-reported aggression and delinquency. Similarly, because previous research has identified a link between friendship conflict and peer-reported aggression and social preference (Rose, Swenson, & Carlson, 2004), we hypothesized that friendship conflict would be negatively associated with peer-reported social acceptance and prosocial behavior, and positively associated with peer-reported aggression and delinquency.

The second set of models that we examined rested on the notion that experiences in one relationship domain may "spill over" into other relationship domains. In these mediated process models, we explored two possible ways in which parent-adolescent conflict, friendship conflict, and social adjustment may be related. First, it is possible that links between parent-adolescent conflict and adolescent social functioning emerge only because parent-adolescent conflict contributes to friendship conflict, which in turn contributes to adolescent social functioning in the peer group. This model is in line with theory and research suggesting that experiences in the family serve as templates for the formation and maintenance of adolescent friendships that ultimately contribute to social adjustment (e.g., De Goede, Branje, Delsing, & Meeus, 2009; Furman, Simon, Shaffer, & Bouchey, 2002). On the other hand, it is possible that problems first arise in the larger peer group, which contributes to conflict with friends and subsequently creates conflictual parent-adolescent relationships. This "child effects" model presumes that adolescents play an active role in shaping their interpersonal experiences (Bell & Harper, 1977; Ladd, 1992). Researchers frequently acknowledge the possibility that parent-adolescent relationships influence peer experiences, but researchers less commonly examine the ways in which peer experiences influence parent-adolescent relationships (but see Van Doorn et al., 2011, for evidence in support of such a model).

Finally, we explored a series of moderator models that tested whether adolescent social functioning can be predicted best by the interaction between parent-adolescent and friendship conflict. For example, Sentse and Laird (2010) found that adolescent reports of conflict with parents were associated with self-reports of antisocial behavior only when adolescents also reported having high levels of conflict with friends. Indeed, it is possible that only high levels of conflict across both relationships would be a risk factor for adolescents' social functioning. In other words, perhaps there is a "tipping point" or threshold at which conflict across relationships has maladaptive outcomes for adolescent

development. From a multiple risk factor perspective, there are several ways in which adolescents' social functioning may depend on the joint influence of conflict at home and with friends. For example, it could be that elevated conflict with parents or friends is associated with poor social functioning, regardless of the amount of conflict in the other relationship. Alternatively, for example, it could be that low levels of conflict with friends serves as a buffer against negative outcomes associated with parent-adolescent conflict, or that adolescents experience deficits in social functioning only when they have high levels of conflict with both parents and friends. Thus, we did not form a specific hypothesis about the nature of the interaction. Instead, we took an exploratory approach to examine whether adolescents' social functioning could be predicted by the interaction of conflict with parents and friends.

Method

Participants

Target participants were 189 11th grade students enrolled in seven suburban high schools in a large metropolitan area (118 girls; mean age = 16.5 years) and their parents. Adolescents were recruited from a larger classroom-based study (n = 2091 eleventh-grade students; 61% girls) to take part in a more detailed study of family relationships. Most families in this subsample were White (73%), with Black/African American (14%), Asian (10%), and Hispanic (3%) families comprising the next largest ethnic/racial groups. Most mothers (92%) and fathers (96%) reported having at least some college education. Annual household income for most participants (95%) was greater than \$41,000. Because of central aims that were part of the larger study, families in the present study included only two-parent families. Families were paid \$125 for their participation.

Measures

Parent-adolescent conflict—We measured parent-adolescent conflict using a widely used semi-structured observational task (e.g., Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993). Adolescents and their parents first rated how much they disagreed with each other on 19 topics about which parents and teens frequently disagree (e.g., homework, chores, time spent with family). A research assistant chose three topics for each dyad to discuss, selecting topics that were rated by the parent and adolescent as high in disagreement. Parent-adolescent dyads were instructed to discuss the first discussion topic until they reached a resolution or decided that they were unable to resolve the disagreement. They were instructed to proceed to the second, and then third, topics, which they discussed until the topics were resolved or when the task ended (after 10 minutes). Thus, some parent-adolescent dyads discussed only one topic, other dyads discussed two topics, and other dyads discussed all three topics during the task. The order of conflict discussions within families was counterbalanced across the sample, such that half of the adolescents participated with their mothers first, and half participated with their fathers first. All conflict tasks were videotaped for later observational coding.

Trained coders rated family members' hostile conflict behaviors using the Hostile Conflict Scale of the Conflict Task Coding System (Ziv, Cassidy, & Ramos-Marcuse, 2002), which was based on an earlier coding system by Kobak and colleagues (1993). We focused on only the Hostile Conflict scale for this investigation (rather than the conceptually distinct additional scales of Avoidance, Assertiveness, and Secure Base Use/Provision) because our interest was in negative aspects of conflict that may place adolescents at risk for problems with peers. The Hostile Conflict scale assesses the overall degree to which a family member engages in sarcastic or contemptuous comments, dysfunctional anger, or disgust during the 10-minute interaction. Scores could range from 1 (no Hostile Conflict) to 7 (high Hostile

Conflict). Six trained coders – blind to all other adolescent and parent information – coded the discussions. Inter-rater agreement was assessed continuously throughout the coding period. At least two coders coded a randomly selected 17% of mother-adolescent interactions (n = 32) and 16% of father-adolescent interactions (n = 31). Reliability scores ranged from .81 to .84. Intercorrelations among mother, father, and adolescent hostility behaviors ranged from .24 to .48, (all ps < .001). A repeated measures ANOVA with Individual (parent, teen) and Dyad (mother-adolescent, father-adolescent) as within subjects factors and adolescent sex as a between subjects factor revealed a significant dyad effect, such that adolescents had greater Hostile Conflict with their mothers than with their fathers, R(1, 187) = 6.95, p = .009. The amount of Hostile Conflict with mothers and fathers did not differ by adolescent sex, however, R(1, 187) = .77, p = .38. A principal components analysis including all scales revealed that the family Hostile Conflict scores loaded onto a single factor explaining 50.1% of the variance; as such, we averaged the scores to make a composite parent-adolescent Hostile Conflict score.

Friend-adolescent conflict—Adolescents completed the Friendship Qualities Scale (Bukowski, Hoza, & Boivin, 1994), a widely used 23-item measure containing five 5-point scales about qualities of adolescents' best friendship. In the present study, we examined only the Conflict scale, which taps negative perceptions of friendship, rather than the four scales that measure positive perceptions of friendship (Companionship, Help, Security, and Closeness). The Conflict scale includes four items about adolescents' global perceptions about the amount of conflict and problems in the friendship (e.g., "I get into fights with my friend;" α = .75). Scores ranged from 5 – 20 (M= 9.67, SD= 3.73). This scale has been shown to have good internal consistency and convergent validity (Bukowski et al., 1994).

Adolescent social acceptance—To assess the overall quality of adolescents' peer relationships, we used a measure of social acceptance devised by Parkhurst and Asher (1992). Students received the following directions: "Please rate the rate the extent to which you like to be in activities with the following students." Below these directions was a randomly generated roster of 75 names of students that were participating in the large classroom-based data collection project. A 5-point Likert-type rating scale ranging from 1 (not at all) to 5 (a lot) was placed to the right of each student's name so that participants could rate their willingness to interact with each student. Participants also had the opportunity to identify students on their rosters whom they did not know (i.e., to the right of the rating scale was the phrase "I do not know this person," which students could circle). Each adolescent's social acceptance score was the mean of all ratings provided by peers who knew him/her, standardized within the adolescent's school.

Adolescent social behaviors—We used a sociometric procedure similar to that described above to assess peer perceptions of adolescents' prosocial, aggressive, and delinquent social behaviors (Parkhurst & Asher, 1992). This time, however, classmates responded by circling "yes" or "no" (or "I do not know this person") to the following questions: "This person is cooperative, helpful, and does nice things" (*prosocial behavior*), "This person starts arguments or fights, says mean things, and gets mad easily" (*aggressive behavior*), and "this person breaks rules, does things you're not supposed to, and gets into trouble at school" (*delinquent behavior*).

Adolescents' social behavior scores were based on these nominations, and were calculated using the following widely used procedure (see Parkhurst & Asher, 1992). First, we divided the number of "yes" nominations adolescents received by the number of possible nominations they could have received from participants who knew them, yielding proportion scores for prosocial, aggressive, and delinquent behavior. This procedure has been shown to be a valid peer assessment of social behavior (Rose, Swenson, & Waller, 2004). Because the

distribution of these scores deviated from normality, we then normalized adolescent's proportion scores using an arcsine square-root transformation (Parkhurst & Asher, 1992).

Procedure

Data collection took place during two sessions. First, in the spring of adolescents' junior year, adolescents completed the FQS and the peer-reported social acceptance and social behavior measures were obtained during a classroom-based data collection session. That summer, adolescents and their parents visited our university laboratory and completed the parent-adolescent conflict task. Trained graduate students supervised data collection and observational coding.

Results

Preliminary Analyses

Missing data—Of the 189 families who participated in the study, 129 families had complete data. The principal reason for missing data was that the friendship measure was added to the study after an initial data collection period, resulting in missing data on this measure for 50 participants. Missing values were imputed using the expectation maximization algorithm to create 40 complete datasets, which were then used to compute estimates of the parameters (see Graham, Olchowski, & Gilreath, 2007). For analyses involving path analysis, we used the default full information maximum likelihood (FIML) estimation method available in LISREL 8.8 (Jöreskog & Sörbom, 2006).

Descriptive statistics—We present means, standard deviations, and intercorrelations for the study variables in Table 1. Marginally significant sex differences emerged in adolescents' perceptions of conflict in their best friendships: Relative to boys, girls perceived marginally less conflict in their friendships, t(187) = -1.93, p = .054, d = .31. No sex differences emerged in observed adolescent-parent conflict behaviors, t(187) = -.02, p = .98 or in peer-reported social acceptance t(187) = -.13, p = .89. Girls and boys differed in peer-reported of social behavior, however. Relative to boys, girls were rated as more prosocial, t(187) = 2.31, p = .021, d = -.38 and less delinquent, t(187) = -3.82, p < .001, d = .58. Boys were rated as marginally more aggressive than girls, t(187) = -1.67, p = .095, d = .27.

Principal Analyses

Data analytic approach—We used measured variable path analysis to test our hypothesis that parent-adolescent and friendship conflict would be directly associated with adolescent social functioning. Then, following Aiken and West (1991), we mean-centered our continuous predictor variables and used hierarchical multiple regression to test for interaction effects. Significant interactions were probed using the Johnson-Neyman (J-N) technique (see Preacher, Curran, & Bauer, 2006). This technique is preferable to traditional tests of simple slopes at +/- 1 SD from the mean because it provides *meaningful values* of the moderator ("regions of significance") for which the simple slope of the regression line is significant. In other words, when significant interactions emerge, this technique allows us to examine the levels of friendship conflict at which the link between parent-adolescent conflict and adolescent social functioning becomes significant.

Tests of direct links between interpersonal conflict and social functioning— Analyses revealed that parent-adolescent hostile conflict was directly associated with peerreported adolescent aggression and delinquency (see Figure 1). Friendship conflict was negatively associated with adolescent prosocial behavior and positively associated with

adolescent delinquency. Neither parent-adolescent conflict nor friendship conflict was associated with adolescent social acceptance.

Tests of mediated links between interpersonal conflict and social functioning
—Analyses revealed that parent-adolescent Hostile Conflict behaviors observed during the

structured laboratory task were unrelated to adolescents' perceptions of conflict with their best friends (r= .00, p= .97). Therefore, there was no evidence to support either of proposed mediated models linking parent-adolescent conflict and social functioning.

Tests of moderated links between interpersonal conflict and social

functioning—Next, we tested a series of models to determine whether four indicators of adolescent social functioning could be predicted by the interaction between parent-adolescent and friendship conflict. We also included interactions with adolescent sex in order to explore whether the pattern of links between interpersonal conflict and social functioning differed for adolescent boys and girls.

Social acceptance: Two significant interactions emerged in the prediction of adolescents' social acceptance (see Table 2). Post-hoc probing of a significant Friend-Adolescent Conflict \times Adolescent Sex interaction revealed that the link between friendship conflict and social acceptance was significant for girls (t[122] = -2.04, p = .04) but not for boys (t[122] = .78, p = .44). Second, a significant Parent-Adolescent Conflict \times Friend-Adolescent Conflict interaction emerged. We used the J-N technique to probe the second interaction and found that greater observed parent-adolescent conflict was associated with lower peer-reported social acceptance only when adolescents reported conflict in the friendship at values greater than 11.79 (21.6% of adolescents had friendship conflict scores in this range).

Prosocial behavior: A significant Parent-Adolescent Conflict × Friend-Adolescent Conflict interaction emerged. We found that greater observed parent-adolescent conflict was associated with lower peer-reported prosocial behavior only when adolescents reported conflict in the friendship at values greater than 9.45 (42.4% of adolescents had friendship conflict scores in this range).

Aggressive behavior: No significant interactions emerged in the prediction of adolescents' aggressive behavior.

<u>Delinquent behavior:</u> A significant Parent-Adolescent Conflict × Friend-Adolescent Conflict interaction emerged in the prediction of adolescents' delinquent behavior. We found that greater observed parent-adolescent conflict was associated with greater peer-reported delinquent behavior only when adolescents reported conflict in the friendship at values greater than 10.94 (33.1% of adolescents had friendship conflict scores in this range).

Discussion

This study examined how conflict across family and friend contexts was associated with adolescents' social functioning. Our findings suggested that, although there were some direct links between relationship conflict and adolescent social functioning, adolescents were most likely to experience poor social functioning when they had high levels of conflict in *both* family and friend relationship contexts. This interaction between parent-adolescent and friend-adolescent conflict suggests that adolescents with high levels of conflict with their parents are not equally at risk for poor peer relationships. Instead, in the present study, the potential negative effects thought to be associated with parent-adolescent conflict only emerged when adolescents also experienced elevated conflict with best friends.

Interestingly, the present study offered no evidence for the role of friendship conflict as a mediator in either of the proposed mediated models linking parent-adolescent conflict and social functioning. At least one reason for this was the unexpected finding that parent-adolescent and friendship conflict were uncorrelated. It is possible that our measures of conflict in these relationships (i.e., observations and self-reports) assessed different aspects of conflict in the relationships, thereby decreasing our ability to identify connections across relationships. On the other hand, Sentse and Laird (2010) used adolescent self-reports to measure conflict with parents and friends and similarly found no connection, so it is unlikely that our choice of assessments is the only explanation for the lack of correspondence in conflict across relationships. Future research should examine other possible factors, such as adolescent psychological functioning (e.g., depression, anxiety) or emotion regulation difficulties, as alternative pathways through which conflictual relationship experiences translate to poor social functioning.

Our findings from the moderation analyses are consistent with the recasting of interpersonal conflict as a normative - and not necessarily negative - component of adolescent socioemotional development (Grotevant, 1998). In fact, some researchers have theorized that conflict may be an important socialization event that could help adolescents learn how to negotiate with others, engage in important perspective-taking activities, understand how to cope effectively with intrapersonal and interpersonal stress, and work to resolve social dilemmas (e.g., Adams & Laursen, 2007). However, when conflict "piles on" in adolescents' lives, individuals may be stretched too thin to accomplish these socialization tasks, which may detract from their abilities to interact appropriately in larger social contexts. Moreover, these additive experiences of conflict may have unintended socialization consequences, such that adolescents may learn-either implicitly or explicitly that conflict should be expected across different areas of life, and such negatively biased perceptions may be detrimental to adolescents' social adjustment. Indeed, our findings are consistent with theory and research demonstrating negative outcomes associated with the accumulation of risk factors (Sameroff, 2000). An important direction for research will be to examine whether adolescents' experiences of conflict in additional relationships (e.g., romantic or sibling relationships) confer additive risk for poor social functioning, or whether adolescents reach a threshold at which additional conflict does not contribute to increasingly negative outcomes.

Surprisingly, our findings in the present investigation did not lend support to our hypotheses about possible sex differences in the links between interpersonal conflict and social functioning. Indeed, in the context of examining several conceptual models, only one sex difference emerged (i.e., the link between friendship conflict and social acceptance was significant for girls, but not for boys). The relative lack of sex differences could be explained in at least two ways. First, it may be that social and emotional impact of conflict becomes more consistent across boys and girls as they reach older adolescence. Another possibility is that sex differences disappear when conflict is high across multiple relationships. Such possibilities await further empirical investigation.

Findings from the present study should be considered alongside some caveats and potential study limitations that may affect the generalizability of the results. We examined parent-adolescent conflict in two-parent, married families, and it is possible that parent-adolescent conflict in single-parent families has a different connection to adolescent social functioning. Further, despite a fairly large sample size, we did not have enough power to test our research questions while keeping mother-adolescent and father-adolescent conflict separate in the analyses. Future research with larger sample sizes should examine the ways in which conflict with mothers, fathers, and friends relate to adolescent social functioning, and whether these relations are unique for adolescent boys and girls. In addition, our cross-

sectional study design limits our ability to make predictive claims about the connections between interpersonal conflict and social functioning, Moreover, because our cross-sectional research design included large-scale school data collection and time-intensive family laboratory visits, a lag-time between assessments of a few months resulted. The possibility that family relationships changed substantially during this period is small, given evidence that both interpersonal conflict and peer reports of social functioning are typically stable over a period of several months (e.g., Burk, Denissen, van Doorn, Branje, & Laursen, 2009; Rubin, Bukowski, & Parker, 1998). Extending this research with longitudinal research designs will be an important next step.

In sum, the current study extended previous research on links between interpersonal conflict and adolescent social adjustment in important ways. Our findings add insight into the question about the role of interpersonal conflict during adolescence. Consideration of conflict across adolescents' relationships may yield a better understanding of the ways in which interpersonal relationships are linked to adolescents' social functioning in the broader peer group. Our use of non-overlapping methods to measure parent-adolescent conflict, friendship conflict, and social functioning was a particular strength given that parent and adolescent reports about conflict have been shown to be biased in meaningful ways (e.g., Ehrlich, Cassidy, & Dykas, 2011; Larson & Richards, 1994; Smith & Forehand, 1986). We encourage researchers to continue using a multi-method approach to exploring the ways in which conflict across family and friend relationship contexts influences adolescent development.

Acknowledgments

This research was supported by the National Institute for Child Health and Human Development (HD36635), the National Institute on Drug Abuse (DA027365), the Janet W. Johnson Summer Fellowship, and the University of Maryland Graduate Student Summer Research Fellowship.

We thank the families who participated in this research and Mindy R. Cabrera for supervising data collection. We are grateful to Kristen Intlekofer, Daniel Isenberg, Melissa Klein, Laura Long, Fatima Ramos Marcuse, Amber Wong, and Yair Ziv for coding the parent-adolescent interactions. We wish to thank Kevin O'Grady, Juliet Aiken, and Laura Sherman of the University of Maryland Design and Statistical Analysis Laboratory for advice about statistical analyses.

References

- Adams RE, Laursen B. The correlates of conflict: Disagreement is not necessarily detrimental. Journal of Family Psychology. 2007; 21:445–458.10.1037/0893-3200.21.3.445 [PubMed: 17874930]
- Aiken, LS.; West, SG. Multiple regression: Testing and interpreting interactions. Thousand Oaks, CA: Sage; 1991.
- Allison BN, Schultz JB. Parent-adolescent conflict in early adolescence. Adolescence. 2004; 39:101–119. [PubMed: 15230069]
- Almeida DM, Kessler RC. Everyday stressors and gender differences in daily distress. Journal of Personality and Social Psychology. 1998; 75:670–680.10.1037/0022-3514.75.3.670 [PubMed: 9781406]
- Bell, RQ.; Harper, LV. Child effects on adults. Hillsdale, NJ: Erlbaum; 1977.
- Bronfenbrenner, U. Interacting systems in human development: Research paradigms: Present and future. In: Bolger, N.; Caspi, A.; Downey, G.; Moorehouse, M., editors. Persons in context: Developmental processes. New York, NY: Cambridge; 1988. p. 25-49.
- Brown BB, Mounts N, Lamborn SD, Steinberg L. Parenting practices and peer group affiliation in adolescence. Child Development. 1993; 64:467–482.10.2307/1131263 [PubMed: 8477629]
- Bukowski WM, Hoza B, Boivin M. Measuring friendship quality during pre- and early adolescence: The development and psychometric properties of the Friendship Qualities Scale. Journal of Social and Personal Relationships. 1994; 11:471–484.10.1177/0265407594113011

Burk WJ, Denissen J, Van Doorn MD, Branje ST, Laursen B. The vicissitudes of conflict measurement: Stability and reliability in the frequency of disagreements. European Psychologist. 2009; 14:153–159.10.1027/1016-9040.14.2.153

- Burk WJ, Laursen B. Adolescent perceptions of friendship and their associations with individual adjustment. International Journal of Behavioral Development. 2005; 29:156–164.10.1080/01650250444000342 [PubMed: 18509518]
- Chung GH, Flook L, Fuligni AJ. Reciprocal associations between family and peer conflict in adolescents' daily lives. Child Development. 2011; 82:1390–1396.10.1111/j. 1467-8624.2011.01625.x [PubMed: 21793820]
- Chung GH, Flook L, Fuligni AJ. Daily family conflict and emotional distress among adolescents from Latin American, Asian, and European backgrounds. Developmental Psychology. 2009; 45:1406–1415.10.1037/a0014163 [PubMed: 19702401]
- De Goede IHA, Branje SJT, Delsing MJM, Meeus WHJ. Linkages over time between adolescents' relationships with parents and friends. Journal of Youth and Adolescence. 2009; 38:1304—1315.10.1007/s10964-009-9403-2 [PubMed: 19779807]
- Demir M, Urberg KA. Friendship and adjustment among adolescents. Journal of Experimental Child Psychology. 2004; 88:68–82.10.1016/j.jecp.2004.02.006 [PubMed: 15093726]
- Ehrlich KB, Cassidy J, Dykas MJ. Reporter discrepancies among parents, adolescents, and peers: Adolescent attachment and informant depressive symptoms as explanatory factors. Child Development. 2011; 82:999–1012.10.1111/j.1467-8624.2010.01530.x [PubMed: 21410916]
- Fletcher AC, Steinberg L, Williams-Wheeler M. Parental influences on adolescent problem behavior: Revisiting Stattin and Kerr. Child Development. 2004; 75:781–796.10.1111/j. 1467-8624.2004.00706.x [PubMed: 15144486]
- Flook L. Gender differences in adolescents' daily interpersonal events and well-being. Child Development. 2011; 82:454–461.10.1111/j.1467-8624.2010.01521.x [PubMed: 21410907]
- Furman W, Simon VA, Shaffer L, Bouchey HA. Adolescents' working models and styles for relationships with parents, friends, and romantic partners. Child Development. 2002; 73:241–255.10.1111/1467-8624.00403 [PubMed: 14717255]
- Galambos NL, Sears HA, Almeida DM, Kolaric GC. Parents' work overload and problem behavior in young adolescents. Journal of Research on Adolescence. 1995; 5:201–223.10.1207/s15327795jra0502_3
- Graham JW, Olchowski AE, Gilreath TD. How many imputations are really needed? Some practical clarifications of multiple imputation theory. Prevention Science. 2007; 8:206–213.10.1007/s11121-007-0070-9 [PubMed: 17549635]
- Grotevant, HD. Adolescent development in family contexts. In: Damon, W.; Eisenberg, N., editors. Handbook of child psychology. Vol 3: Social, emotional, and personality development. 5. Hoboken, NJ: Wiley; 1998. p. 1097-1149.
- Hartup WW. The social worlds of childhood. American Psychologist. 1979; 34:944–950.10.1037/0003-066X.34.10.944
- Holmbeck, GN. A model of family relational transformations during the transition to adolescence: Parent-adolescent conflict and adaptation. In: Graber, JA.; Brooks-Gunn, J.; Petersen, AC., editors. Transitions through adolescence: Interpersonal domains and context. Mahwah, NJ: Erlbaum; 1996. p. 167-199.
- Ingoldsby EM, Shaw DS, Winslow E, Schonberg M, Gilliom M, Criss MM. Neighborhood disadvantage, parent-child conflict, neighborhood peer relationships, and early antisocial behavior problem trajectories. Journal of Abnormal Child Psychology. 2006; 34:303–319.10.1007/s10802-006-9026-y [PubMed: 16705498]
- Jöreskog, KG.; Sörbom, D. LISREL 8.8 for Windows [Computer software]. Skokie, IL: Scientific Software International, Inc; 2006.
- Kerns, KA.; Contreras, JM.; Neal-Barnett, AM. Family and peers: Linking two social worlds. Westport, CT: Praeger; 2000.
- Kobak RR, Cole HE, Ferenz-Gillies R, Fleming WS, Gamble W. Attachment and emotion regulation during mother-teen problem solving: A control theory analysis. Child Development. 1993; 64:231–245.10.2307/1131448 [PubMed: 8436031]

Ladd, GW. Themes and theories: Perspectives on processes in family–peer relationships. In: Parke, RD.; Ladd, GW., editors. Family–peer relationships: Modes of linkage. Hillsdale, NJ: Erlbaum; 1992. p. 1-34.

- Ladd GW, Kochenderfer BJ, Coleman CC. Friendship quality as a predictor of young children's early school adjustment. Child Development. 1996; 67:1103–1118.10.2307/1131882 [PubMed: 8706512]
- Ladd, GW.; Pettit, GS. Parenting and the development of children's peer relationships. In: Bornstein, MH., editor. Handbook of parenting: Vol 5. Practical issues in parenting. 2. Mahwah, NJ: Erlbaum; 2002. p. 269-309.
- Larson, R.; Richards, MH. Divergent realities: The emotional lives of mothers, fathers, and adolescents. New York, NY: Basic Books; 1994.
- Laursen B, Collins W. Interpersonal conflict during adolescence. Psychological Bulletin. 1994; 115:197–209.10.1037/0033-2909.115.2.197 [PubMed: 8165270]
- Noakes MA, Rinaldi CM. Age and gender differences in peer conflict. Journal of Youth and Adolescence. 2006; 35:881–891.10.1007/s10964-006-9088-8
- Paley B, Conger RD, Harold GT. Parents' affect, adolescent cognitive representations, and adolescent social development. Journal of Marriage and the Family. 2000; 62:761–776.10.1111/j. 1741-3737.2000.00761.x
- Parke, RD.; Ladd, GW. Family-peer relationships: Modes of linkage. Hillsdale, NJ: Erlbaum; 1992.
- Parker JG, Asher SR. Peer relations and later personal adjustment: Are low-accepted children at risk? Psychological Bulletin. 1987; 102:357–389.10.1037/0033-2909.102.3.357 [PubMed: 3317467]
- Parker JG, Asher SR. Friendship and friendship quality in middle childhood: Links with peer group acceptance and feelings of loneliness and social dissatisfaction. Developmental Psychology. 1993; 29:611–621.10.1037/0012-1649.29.4.611
- Parkhurst JT, Asher SR. Peer rejection in middle school: Subgroup differences in behavior, loneliness, and interpersonal concerns. Developmental Psychology. 1992; 28:231–241.10.1037/0012-1649.28.2.231
- Pettit GS, Bates JE, Dodge KA, Meece DW. The impact of after-school peer contact on early adolescent externalizing problems is moderated by parental monitoring, perceived neighborhood safety, and prior adjustment. Child Development. 1999; 70:768–778.10.1111/1467-8624.00055 [PubMed: 10368921]
- Preacher KJ, Curran PJ, Bauer DJ. Computational tools for probing interaction effects in multiple linear regression, multilevel modeling, and latent curve analysis. Journal of Educational and Behavioral Statistics. 2006; 31:437–448.
- Rose AJ, Swenson LP, Carlson W. Friendships of aggressive youth: Considering the influences of being disliked and of being perceived as popular. Journal of Experimental Child Psychology. 2004; 88:25–45.10.1016/j.jecp.2004.02.005 [PubMed: 15093724]
- Rose AJ, Swenson LP, Waller EM. Overt and relational aggression and perceived popularity: Developmental differences in concurrent and prospective relations. Developmental Psychology. 2004; 40:378–387.10.1037/0012-1649.40.3.378 [PubMed: 15122964]
- Rubin, KH.; Bukowski, W.; Parker, JG. Peer interactions, relationships, and groups. In: Damon, W.; Eisenberg, N., editors. Handbook of child psychology: Vol. 3. Social, emotional, and personality development. 5. New York, NY: Wiley; 1998. p. 619-700.
- Sameroff, AJ. Dialectical processes in developmental psychopathology. In: Sameroff, AJ.; Lewis, M.; Miller, SM., editors. Handbook of developmental psychopathology. 2. New York, NY: Springer; 2000. p. 23-40.
- Sentse M, Laird RD. Parent-child relationships and dyadic friendships as predictors of behavior problems in early adolescence. Journal of Clinical Child and Adolescent Psychology. 2010; 39:873–884.10.1080/15374416.2010.517160 [PubMed: 21058133]
- Smetana, JG. Adolescent-parent conflict: Implications for adaptive and maladaptive development. In: Cicchetti, D.; Toth, S., editors. Rochester symposium on developmental psychopathology. Rochester, NY: University of Rochester Press; 1996. p. 1-46.

Smith KA, Forehand R. Parent-adolescent conflict: Comparison and prediction of the perceptions of mothers, fathers, and daughters. Journal of Early Adolescence. 1986; 6:353–367. 10.1177/0272431686064006

- Steinberg L, Mounts NS, Lamborn SD, Dornbusch SM. Authoritative parenting and adolescent adjustment across varied ecological niches. Journal of Research on Adolescence. 1991; 1:19–36.
- Van Doorn MD, Branje SJT, VanderValk IE, De Goede IHA, Meeus WHJ. Longitudinal spillover effects of conflict resolution styles between adolescent-parent relationships and adolescent friendships. Journal of Family Psychology. 2011; 25:157–161.10.1037/a0022289 [PubMed: 21355656]
- Ziv, Y.; Cassidy, J.; Ramos-Marcuse, F. The conflict task coding system. University of Maryland; College Park: 2002. Unpublished manuscript

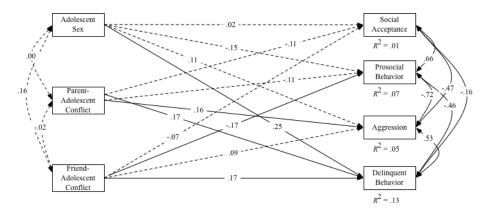


Figure 1. Prediction of adolescent social functioning. Adolescent sex coded as 0 = female, 1 = male. Solid lines indicate significant paths, and dashed lines indicate non-significant paths. Coefficients are standardized values.

Ehrlich et al.

\$watermark-text

Descriptive Statistics and Intercorrelations among Study Variables

1. Adolescent Sex - - 0-1 2. Parent-Adolescent Conflict 1.37 .62 .98-5.25 3. Friend-Adolescent Conflict 9.67 3.73 5-20 4. Social Acceptance .03 1.05 -2.69-2.18	0 - 1 - 8 - 5.25 5 - 20	.00	00. 761. 00				
	8 - 5.25 5 - 20	1		00.	18*	.137	.28 **
	5 – 20		00:	0611	11	.16*	*81.
.03 1.05	2			05	0518*	60.	*61.
	69 – 2.18				** 89.	49	*81
5. Prosocial Behavior 1.10 .19 .42 – 1.57	2 - 1.57					78***56**	56**
6. Aggressive Behavior $.33$ $.20$ $0-1.13$) – 1.13					1	.61
7. Delinquent Behavior .32 .24 0 – 1.21	0 – 1.21						

Note. Adolescent sex coded as 0 = female, 1 = male.

p < .10.

p < .001.

Page 14

Ehrlich et al.

Table 2

Hierarchical Regressions Predicting Adolescent Social Functioning from Conflict with Parents and Friends

b SE R^2 b SE R^2 b		Social Acceptance	Accept	nce	Prosocial Behavior	al Beh	avior	Aggressive Behavior	sive Be	havior	Delinquent Behavior	nent Be	havior
Solve the secont Sex 0.02 0.16 0.07^* 0.03 0.09^* 0.09		q	SE	R^2	q	SE	R^2	q	SE	\mathbb{R}^2	q	SE	R^2
nt-Adolescent Conflict .02 .16 07* .03 nt-Adolescent Conflict 09 .13 03 03 017 .00 nt-Adolescent Conflict × Adolescent Sex 39 .27 017 .00 15*** nt Conflict × Adolescent Sex 39 .27 04 .05 nt Conflict × Adolescent Sex nt Conflict × Friend Conflict nt Conflict × Friend Conflict × Friend Conflict × Sex	Step 1			00.			.02			.01			*** 60.
nt-Adolescent Conflict 09 $.13$ 03 $.02$ $.09$ * nd-Adolescent Conflict 02 $.03$ 01 $.00$ 01 nt Conflict × Adolescent Sex 39 07 04 05 15 ** nt Conflict × Adolescent Sex 10 * 09 04 01 01 nt Conflict × Friend Conflict 14 ** 05 02 ** 01 15 ** nt Conflict × Friend Conflict × Sex 06 09 01 01 01	Adolescent Sex	.02	.16		*07			.05	.03		.14 ***	90.	
int-Adolescent Conflict 09 1.3 03 0.0 ind-Adolescent Conflict 02 0.3 01 0.0 int Conflict × Adolescent Sex 39 2.7 04 0.5 int Conflict × Adolescent Sex 1.0^* 0.9 0.0 0.0 int Conflict × Friend Conflict 14^{**} 0.5 02^{**} 0.1 int Conflict × Friend Conflict × Sex 06 0.9 01 0.0	Step 2			.03			* 60·			*80.			.16***
nd-Adolescent Conflict 02 $.03$ 01 $^{+}$ $.00$ nt Conflict × Adolescent Sex 39 $.27$ 04 $.05$ nd Conflict × Adolescent Sex $.10^{*}$ $.09$ $.01$ $.01$ nt Conflict × Friend Conflict 14^{**} $.05$ 02^{**} $.01$ nt Conflict × Friend Conflict × Sex 06 $.09$ 01 $.02$	Parent-Adolescent Conflict	09	.13		03	.00		* 50.	.00		*90°	.03	
nt Conflict × Adolescent Sex	Friend-Adolescent Conflict	02	.03		017			01	.01		.01	.01	
and Conflict \times Adolescent Sex 39 .27 04 .05 and Conflict \times Adolescent Sex .10* .09 .01 .01 and Conflict \times Friend Conflict \times Friend Conflict \times Sex 05 .05 02** .01 and Conflict \times Friend Conflict \times Sex 06 .09 01 .02	Step 3			.15 **			.15**			.12*			.22 ***
	Parent Conflict \times Adolescent Sex	39	.27		04	.05		.07	.05		90.	90.	
ant Conflict \times Friend Conflict \times Friend Conflict \times Sex 05 $**$ $.05$ $**$ $.1$	Friend Conflict \times Adolescent Sex	*01.	60:		.01	.01		01	.01		01	.01	
.15 ** .		14 **			02**			.01	.01		.03*	.01	
06 .0901	Step 4			.15 **			.15 **			.12*			.24 **
	$Parent\ Conflict \times Friend\ Conflict \times Sex$	06	60:		01	.00		.01	.00		.03	.02	

Note. Unstandardized regression coefficients are reported as their entry into the model. Adolescent sex coded as 0 = female, 1 = male.

 ** p<.01.

*** p .001. Page 15