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Peer and Maternal Relationship Predictors of Adolescent Romantic Conflict Resolution

Pallavi Visvanathan
University of Denver

PEER AND MATERNAL RELATIONSHIP PREDICTORS OF ADOLESCENT ROMANTIC CONFLICT RESOLUTION

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Advisor: Wyndol Furman, Ph.D.

Author: Pallavi Visvanathan
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Abstract

The objective of the current study was to examine whether change in adolescent conflict resolution in romantic relationships is predicted by adolescents' prior interactions with mothers and friends. A community sample of 191 adolescents (96 female), representative of the U.S. population, their mothers and close friends participated in this study. Data collection began when adolescents were in 10th grade (Average age = 15.9, *SD* = .52) and continued for the next five and a half years. Results indicated that teens engaged in positive problem solving, withdrawal, and compliance far more frequently than in aggressive conflict resolution strategies. Hierarchical linear modeling was used to analyze growth curves. Results indicated linear increases in problem solving and withdrawal over the course of late adolescence and early adulthood. Levels of compliance, verbal aggression, and physical aggression stayed the same on average. Of all predictors examined in this study, teens' negative interactions and observed conflict with friends appeared particularly predictive of conflict resolution behavior with a romantic partner in 10th grade. Support and communication skills with friends and mothers were predictive of conflict resolution behavior over time. Implications and directions for future research are discussed.

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Introduction

Limited research exists that examines the development of conflict resolutions strategies (both adaptive and maladaptive) among adolescents in the context of romantic relationships. This study examines multiple maladaptive and an adaptive conflict resolution strategy in order to provide a more comprehensive picture of how adolescents behave in the face of conflict with romantic partners.

Prior research has identified family-of-origin and peer variables as significant predictors of adolescents' behavior in romantic relationships. These predictors have included family conflict, family relationship quality, friendship quality, and peer attitudes towards violence (Capaldi, Dishion, Stoolmiller, & Yoerger, 2001; Crockett & Randall, 2006; Quigley et al., 2006; Reese-Weber & Kahn, 2005). However, limited work to date has examined whether behaviors teens display during interactions with parents and peers predict the development of behavioral strategies utilized during conflict with a romantic partner. An objective of the present study was to examine whether behaviors used *in the context* of problem discussion and conflict resolution with mothers and friends predict adolescents' use of conflict resolution strategies in later romantic relationships.

Romantic Conflict Resolution Skill and Strategies

Western adolescents tend to become involved in dating fairly early in life (with some variation by ethnicity); by the age of 15 most adolescents have had some experience with dating (Blyth, Hill, & Thiel, 1982; Feiring, 1996). Although adolescents report feeling a great deal of positive emotion associated with their romantic

relationships, interpersonal conflicts occur often between adolescent romantic partners (Furman & Buhrmester, 1992; Laursen, 1995). Laursen (1995) finds that such conflict is an integral component of adolescent intimate relationships which, appropriately, requires each member of the dyad to behave in such a way as to promote the integration of developmentally appropriate intimacy goals with independence goals.

Research findings suggest that adolescents' behavioral responses to relationship conflict are quite varied. Such responses include coercion (which might include physical and/or verbal aggression), seeking social support, distraction, avoidance, compromise, problem-solving, and negotiation (Feldman & Gowen, 1998; Kurdek, 1994; Laursen, Finkelstein, & Betts, 2001; Straus, 1979). Based on these findings, it appears that adolescents contain a variety of adaptive and maladaptive behaviors in their repertoire of conflict resolution strategies. However, the bulk of the study in this area has centered on confrontational and aggressive styles of conflict resolution between adolescent romantic partners.

Studies examining the prevalence of aggression in teen romantic relationships document a surprisingly high use of verbal and physical violence as a response to conflict with a romantic partner. In American samples, up to 50% of adolescent girls and boys report engaging in physical dating aggression (Cascardi, Avery-Leaf, O'Leary, & Slep, 1999; Foshee, 1996; Hickman et al., 2004). Verbal aggression may be even more prevalent as its use is reported by 35% to 80% of adolescents across samples (Capaldi & Crosby, 1997; McLaughlin, Leonard, & Senchak, 1992; Wolfe, Wekerle, Scott, Straatman, & Grasley, 2004). Due to the focus of research on aggressive behaviors in adolescent romantic relationships, limited information is available on the prevalence rates

of behaviors like compliance, withdrawal, positive problem solving, negotiation, compromise, and so on (Darling, Cohan, Burns, & Thompson, 2008).

In one of the few exceptions to this case, Feldman and Gowen (1998) note that although a majority of their adolescent sample (69%) used at least one violent behavior on at least a few occasions, the mean use of confrontational styles of conflict resolution in a romantic relationship was significantly less than the mean use of other, more positive, styles of conflict resolution. Similarly, Laursen and colleagues (2001) report that, teens tend to use more negotiation than either coercion or disengagement during conflict resolution. Thus, although confrontational styles emerge frequently with romantic partners, these additional findings suggest that focusing on adolescent physical and verbal dating violence can skew our understanding of how teens manage conflict with romantic partners (Collins & Laursen, 1992; Feldman & Gowen, 1998).

Therefore, one goal of this study was to examine the frequency of use of a range of positive and negative behaviors (including coercive/aggressive behaviors) reported by adolescents' as responses to conflict in a romantic relationship. A major benefit of examining multiple conflict resolution strategies is that doing so permits an assessment of potentially differing associations between predictors and different conflict resolution strategies which can help guide prevention and intervention efforts (Van Slyck, Stern, & Zak-Place, 1996). To this end, the current study examined both adaptive (positive problem solving) and multiple maladaptive (withdrawal, compliance, physical aggression, and verbal aggression) conflict resolution strategies utilized by adolescents in romantic relationships. Although only one adaptive conflict resolution strategy was assessed: positive problem solving, this particular construct has been identified as one of

the most important and developmentally appropriate strategies for effective interpersonal conflict resolution among adolescents (Van Slyck et al., 1996).

Parent & Peer Influences

Researchers in the area of adolescent romantic relationships believe that adolescents learn how to navigate their romantic relationships based on prior experiences in other kinds of intimate relationships, especially those with parents and close friends (Collins & Sroufe, 1999; Connolly & Goldberg, 1999; Connolly, Furman, & Konarsky, 2000; Furman & Flanagan, 1997; Furman & Simon, 1999; Kinsfogel & Grych, 2004; Simon, Elder, & Evans, 1992). Evidence for this idea comes from findings documenting similarities in the qualities of these different relationships. For example, emotional closeness, support, and open communication with parents have been linked to similar qualities in teens' romantic relationships (see Connolly & McIsaac, 2009). Similarly, closeness and openness with friends have been linked to comparable qualities in romantic relationships (see Connolly & McIsaac, 2009). The link between qualities of teens' relationships with parents and friends and their romantic partners is not limited to positive qualities. For example, similar patterns of continuity have been identified between hostility and aggression in parent and peer relationships and romantic relationships (Capaldi et al., 2001; see Connolly & McIsaac, 2009).

Adolescents experiencing strife with a romantic partner are by no means new to the experience of interpersonal conflict. Disagreements and arguments are a common feature of the parent-child relationship and by the time individuals reach adolescence they have had extensive experience managing conflict with parents (Borbely, Graber, Nichols, Brooks-Gunn, & Botvin, 2005; Stein & Albro, 2001; Vuchinich, 1987). Additionally, as

individuals progress through childhood and then adolescence they spend increasing amounts of time with friends and other peers (Furman & Buhrmester, 1992; Larson & Richards, 1991). Learning to manage conflict is an important social task in friendships and opportunities to do so present themselves frequently (Laursen, 1995; von Salisch & Vogelgesang, 2005). Thus, intimate relationships with parents and close friends are thought to create overlapping social contexts within which teens develop skills and behaviors that are then used in later romantic relationships (Connolly & McIsaac, 2009).

Influence of Parent-Child Relationships on Teen Romantic Relationships

The *socialization* model (see Conger, Cui, Bryant, & Elder, 2000; Gerard, Krishnakumar, & Buehler, 2006) provides an explanation for links between parent-child relationships factors and teens' behavior with other intimate partners. Unfavorable parenting practices are thought to encourage deviant behavior in children which increases the likelihood of engagement in maladaptive behaviors during conflict with future romantic partners. This model purports that parents who are less attentive and available have offspring who, without adequate supervision, stray into risk taking and maladaptive behaviors that put them at risk for engaging in intimate partner violence (Capaldi & Patterson, 1991; Jorgenson, 1985; Kim, Conger, Lorenz, & Elder, 2001; Magdol, Moffitt, Caspi, & Silva, 1998; Straus & Savage, 2005; Wolfe, 1985). Conversely, parents who are likely to monitor and discipline their children effectively are thought to inhibit negative behaviors in their children. Children or adolescents parented in this way are also likely to be skilled in affect regulation, social competence, and conflict resolution (Bouchey & Furman, 2003; Conger et al., 2000).

The *direct socialization* model proposes that beyond general parenting practices like monitoring and supervision, specific behaviors used in dyadic interactions teach the child or adolescent how to behave in similar situations with other intimate partners (Conger et al., 2000, Linder & Collins, 2005). Thus, in addition to poor monitoring/discipline promoting the development of antisocial behaviors in adolescence and increased risk for intimate partner violence (Capaldi & Clark, 1998), this model suggests that that in a broader context (as in the case of conflict resolution skill development rather than aggressive behavior alone), adolescents tend to use those behaviors and respond in those ways which typified actual interactions with parents during times of conflict. Thus, conflict resolution strategies ranging from aggression to problem solving are thought to be significantly influenced by features of communication and interactions between parent and child (Bryant & Conger, 2002; Feldman, Gowen, & Fisher, 1998; Sobol, 2001; Van-Slyck, et al., 1996).

A few studies provide preliminary evidence for the link between teens' conflict resolution behavior with parents and with romantic partners. Andrews, Foster, Capaldi, and Hops (2000) reported strong relations between aversive communication in the parent-child dyad and aversive communication as well as physical aggression in the child-partner dyad. Linder and Collins (2005) also found a significant association between adolescents' negative interactions with parents (composed of negative affect, hostility, confrontive attacking, conflict, and negative conflict resolution) and later physical aggression in a romantic relationship. Neither of these studies examined the effects of features of parent-adolescent communication on conflict resolution strategies other than physical aggression.

Research with college students also provides preliminary evidence for links between parent-teen and young adult-romantic partner conflict resolution behavior. Reese-Weber & Bartle-Haring (1998) found that undergraduate students' retrospective reports of attack, avoidance, and compromise strategies with parents were correlated with reports of these same conflict resolution strategies with a romantic partner. However, these findings have yet to be replicated with an adolescent sample. Additionally, although scant research has examined the relation between parent-child interaction features and *positive* conflict resolution in adolescent romantic relationships, preliminary evidence for such a link does exist. Reese-Weber and Bartle-Haring (1998) presented self-report data linking undergraduate students' positive problem solving in the romantic relationship to positive problem solving in the parent-child relationship.

Although each of the studies reviewed here offer some evidence to suggest that adolescents' conflict resolution with romantic partners is influenced by their experiences with conflict resolution with parents, much of this research is limited in breadth or generalizability. Three major limitations of the studies reported here include a sole focus on aggressive behavior as a conflict resolution strategy (e.g., Andrews et al., 2000; Capaldi & Clark, 1998; Linder & Collins, 2005), the use of cross-sectional or retrospective designs (e.g., Reese-Weber & Bartle-Haring, 1998) and the generalization of findings from samples of college students or at-risk adolescent boys (e.g., Capaldi & Clark, 1998; Reese-Weber & Bartle-Haring, 1998). As indicated previously, examining multiple conflict resolution strategies is necessary to better understand the range in teens' responses to romantic conflict. Findings from cross-sectional studies are valuable but must be considered preliminary as there are many threats to their validity. Such findings

provide the basis for future investigation and longitudinal research is important to help strengthen their validity. Lastly, findings from undergraduate or adult samples, or at-risk teen samples must be replicated with community samples of adolescents as there are important developmental and socio-cultural differences between these groups that could result in different patterns of results.

Thus, a goal of the current study was to examine, in a community sample of adolescents, the prospective associations between parent-adolescent relationship variables and multiple conflict resolution strategies employed in later romantic relationships.

Influence of Friendships on Teen Romantic Relationships

Researchers in this field generally agree that the experience and goals of conflict resolution with peers differ from those with parents (Adams & Laursen, 2001). With peers (friends and romantic partners) adolescents generally manage disagreements in a way that avoids the dissolution of the relationship. This is in contrast to responses to conflict with a parent where the dissolution of the relationship is an unlikely outcome (Laursen, 1993). This finding is supported by Maccoby's (1996) observation that children take greater pains to moderate conflict with close friends than with family members.

These findings also lend themselves to the consideration of the *direct socialization model* whereby adolescents are likely to manage conflict with romantic partners using behaviors learned and practiced in the context of conflict with friends. The similarity in goals of conflict resolution with friends and romantic partners suggest that the link between interactions with friends and conflict resolution behavior with partners may be more substantial than that between interactions with parents and conflict

resolution behavior with partners. Indeed, some researchers have presented preliminary evidence to suggest that peer related variables are a stronger influence on conflict resolution behavior with a romantic partner than parent and family factors (Arriaga & Foshee, 2004; Linder & Collins, 2005).

Research findings suggest that adolescents with friends who engage in antisocial/deviant behavior or dating aggression are more likely to engage in such behaviors themselves (Arriaga & Foshee, 2004; Capaldi et al., 2001; Dishion, Eddy, & Haas, Li, et al., 1997). Further, the quality of adolescents' friendships is associated with the quality of adolescents' romantic relationships as well as with adolescent dating aggression such that higher friendship quality predicts higher romantic relationship quality and lower dating aggression (Linder & Collins, 2005). In one of the few studies of conflict resolution strategies other than aggression, Shute & Charlton (2006) found that adolescents engaged in compromise and overt anger with romantic partners to a similar degree as they did with friends.

As with studies examining continuity between parent-child relationships and teen romantic relationships, these studies linking friendships to romantic relationships are also limited in scope and generalizability by an exclusive focus on aggressive or abusive behaviors (e.g., Arriaga & Foshee, 2004; Capaldi et al., 2001; Dishion et al., 1997), the use of cross-sectional designs (e.g., Arriaga & Foshee, 2004; Shute & Charlton, 2006), and the use of at-risk samples of adolescents (e.g., Capaldi et al., 2001; Dishion et al., 1997).

Thus, a goal of the current study was to examine, in a community sample of adolescents, the prospective associations between adolescent-friend relationship variables and multiple conflict resolution strategies employed in later romantic relationships.

Gender Differences

Evidence for gender differences in the use of the various conflict resolution strategies examined in this study is somewhat mixed. Some researchers have argued that boys are more likely to engage in aggressive and avoidant behaviors and girls are more likely to engage in cooperative and pro-social behaviors during interpersonal conflict in adolescence (Feldman & Gowen, 1998; Owens, Daly, & Slee, 2005; Thayer, 2005; de Wied, Branje, & Meeus, 2007). However, other research finds that adolescent girls report higher rates of physical and verbal aggression in romantic relationships than do males (Capaldi & Crosby, 1997; Graves, Sechrist, White, & Paradise, 2005; Gray & Foshee, 1997; Wolfe, Scott, & Crooks, 2005). Yet others find no gender differences in reports of aggression as a conflict resolution strategy in adolescent romantic relationships (Feldman & Gowen, 1998). Feldman and Gowen (1998) also failed to find gender differences in the use of avoidant behaviors during conflict with a romantic partner. As the research in this area is inconclusive regarding the use of different conflict resolution strategies no predictions were made regarding gender differences for the current study. However, analyses were conducted to assess for possible gender effects.

Current Study

The objective of the current study was to examine whether adolescent conflict resolution in romantic relationships is predicted by adolescents' interactions with mothers and friends. Prior research in this area has been limited by a focus on coercive conflict

resolution strategies to the exclusion of more diverse negative and positive conflict resolution skills. Additional limitations arise from the use of retrospective reports or cross-sectional designs, the generalization of results from undergraduate students or adults or at-risk adolescent boys, or the use of self-report data alone. The current project attempted to address these limitations in multiple ways.

First, this study examined five different conflict resolution strategies reported by teens during conflict with a romantic partner: positive problem solving, withdrawal, compliance, verbal aggression, and physical aggression. Second, it examined prospective, longitudinal data using latent growth curve modeling. The latent growth curve approach is believed to be the most appropriate analytic approach when examining change that is thought, as in this case, to represent a stable developmental process (Young, Furman, & Laursen, in press). Analyses in this study were aimed at identifying and predicting inter-individual variability in rates of change in use of various conflict resolution behaviors. Third, it utilized data obtained from a community sample of adolescent boys and girls. It was expected that this strategy would result in findings pertaining to developmental aspects of the typical teen's intimate relationships and would provide important comparison data for other research that targets at-risk groups. Fourth, it examined the effects of two observational variables describing interactions with mothers and friends (i.e., conflict and communication skills) as well as two self-reported variables describing additional aspects of the relationships with mothers and friends (i.e., support and negative interactions). The hypotheses of the current study were as follows:

It was expected that teens would report higher levels of problem solving than all other conflict resolution strategies and lower levels of verbal aggression and physical

aggression than all other conflict resolution strategies. It was expected that the inclusion of an adaptive and a number of maladaptive responses, not restricted to coercive or aggressive responses, would provide results supportive of other researchers' claims that teens engage in a variety of behavioral responses to romantic relationship conflict and tend to engage in aggressive behaviors less frequently than they do other behaviors (Feldman & Gowen, 1998; Laursen et al., 2001).

It was expected that problem solving would increase over time and withdrawal, compliance, verbal aggression and physical aggression would decrease over time. Research suggests that conflict resolution skills improve with age, and that adolescence is marked by a shift from coercive strategies of conflict resolution to more constructive ones (Laursen, 1996; and Laursen et al., 2001). Thus, it was expected that adaptive behaviors would increase over time and maladaptive or coercive behaviors would decrease over time.

It was expected that observed communication skills and self-reported support with mother and friend would be positively related to problem solving in 10th grade and to change in problem solving over time. Likewise, it was expected that observed conflict behavior and self-reported negative interactions with mother and friend would be positively related to withdrawal, compliance, verbal aggression, and physical aggression. Prior research has linked negative aspects of communication with parents and peers (for example, negative affect, conflict, and hostility) and positive aspects (for example, positive problem solving) to parallel outcomes with romantic partners (Andrews et al., 2000; Linder & Collins, 2005; Reese-Weber & Bartle-Haring, 1998). No particular study findings exist to suggest precise associations between withdrawal or

compliance in the romantic relationship and features of interactions with friends and parents; however, given findings linking aversive behavior in each type of relationship (Andrews et al., 2000) it is likely that these romantic conflict resolution strategies are associated with negative features of the teen-parent and teen-friend dyads.

Method

Participants

Participants were part of a longitudinal study examining the role of parent, peer, and romantic relationships in adolescent psycho-social adjustment. The overall sample comprised 200 adolescents (100 female and 100 male; *M* age = 15.89 years, *SD* = .52, range = 14.45 – 17.43 years) who were recruited when they were in the 10th grade. They were recruited from a diverse range of neighborhoods and schools in a metropolitan area of the Western United States. The sample consisted of 11.5% African American, 12.5% Hispanic, 1.5% Native American, 1% Asian American, 4% biracial, and 69.5% White, non Hispanic adolescents and is relatively representative of the United States population.

With regard to family structure, 57.5% were living with two biological or adoptive parents, 11.5% were living with a biological or adoptive parent and a step-parent or partner, and the remaining 31% were living with a single parent or relative. With regard to sexual orientation, 94% identified as heterosexual/straight, whereas the remaining 6% identified as bisexual, gay, lesbian, or questioning. Sexual minorities were retained in the sample to be inclusive and also because the majority of participants identifying as a sexual minority indicated being bisexual or questioning their sexual identity.

The sample was of average intelligence (WISC-III vocabulary score M = 9.80, SD = 2.44) and did not differ from national norms on 11 of 12 indices of adjustment derived from the Child Behavior Checklist and Youth Self Report (Achenbach, 1991), the State

Trait Anxiety Inventory (Spielberger, 1983) and the Monitoring the Future survey (Johnston, O'Malley, & Bachman, 2002).

Also included in this study were the primary maternal figure residing with participating adolescents (N = 197) and a close friend (N = 191) nominated by each participating adolescent. The vast majority of maternal figures were the participants' biological or adoptive mother (97%); the remainder were a step-mother or grandmother whom the participant had lived with for at least 4 years. Close friends were 13 to 18 years of age (M = 15.41, SD = .87), and their racial/ethnic identity and socioeconomic background were similar to the focal adolescents. The majority of adolescents and their peers were same-gender friends (n = 166); a minority were other-gender friends (n = 25). The mean duration of friendships was 4.21 years (SD = 3.12). Ninety-nine percent of friendships were reciprocated based on adolescent and friend ratings of the relationship. Participants, mothers, and friends were financially compensated for participating.

Data collection began when adolescents were in 10^{th} grade (Time 1) and proceeded in yearly intervals for the next 3 years (through Time 4). Time 5 data collection followed 18 months after Time 4. Attrition rates were very low and ranged from 0% at Time 2 to 5% at Time 5 (N at Time 1 = 200; N at Time 2 = 200; N at Time 3 = 199; N at Time 4 = 196; N at Time 5 = 190). For the current study, dyadic observational data (with a close friend and with mother) obtained in wave 1, questionnaire data regarding relationships with close friend and mother in wave 1, and questionnaire data regarding romantic conflict resolution strategies obtained from adolescents in waves 1 through 5 were used.

Procedures and Measures

Adolescents participated in a series of laboratory sessions in which they were interviewed about their close relationships and were observed interacting in their relationships. They also completed questionnaires at each session as well as between the visits. Close friends and mothers participated in separate observed interactions with the focal adolescents. The following measures were used in the current study.

Demographic Information

Adolescents and parents reported demographic information on surveys completed at Time 1. For the purposes of this study, adolescent-reported gender, ethnicity, and parent-reported socioeconomic status were examined. Socioeconomic status was calculated as a composite of 3 variables: parents' average income (or mother's income if teen lived with mother alone), parents' average education (or mother's education), and parents' average job occupation (or mother job occupation). Parents' average job occupation was computed using the Nakao and Treas (1992; as cited in Entwisle & Astone, 1994) socioeconomic index ratings that are cross-referenced to 1980 census occupational codes.

Conflict Resolution Strategies

The *Conflict Resolution Style Inventory* (CRSI; Kurdek, 1994) (see Appendix) consists of 16 items pertaining to adolescents' attempts to handle conflict. Adolescents were asked to note to what degree (1= never; 7=always) they had engaged in each of these behaviors with someone they had dated in the past year. This measure yields four scales: 1) Positive Problem Solving (e.g., "negotiating and compromising"), 2) Withdrawal (e.g., "tuning the other person out"), 3) Compliance (e.g., "not defending my

own position"), and 4) Dominance (e.g., "throwing insults and 'digs'"). The dominance scale was used to measure verbal aggression. Four items from the Conflict Tactics Scale (Straus, 1979) were added to the CRSI to assess adolescents' physical aggression with romantic partners (e.g., "slapping or hitting"). Data obtained on this questionnaire from adolescents in Time points 1 through 5 were used in this study. Cronbach's alphas indicated satisfactory internal consistency (i.e., greater than .69) for all scales at all time points.

Observed Dyadic Interactions (with friend and mother, separately)

Adolescent-mother dyads and adolescent-close friend dyads were each videotaped participating in a series of six, five-minute interactions during Time 1 data collection. In the first task, a warm-up, the pair planned a celebration. In the next two tasks, each participant discussed a problem he or she was having outside of their relationship. In the fourth task, the pair discussed a personal goal that the adolescent was working toward. Next, the two discussed a problem inside their relationship, which both had selected as a significant conflict. Finally, as a wrap-up task, the dyad discussed past good times in their relationship. In the present study, the warm-up and wrap-up segments were not coded. To minimize halo effects, each segment was coded at a different time.

The *Interactional Dimensions Coding System* (IDCS; Julien, Markman, & van Widenfelt, 1986) was used to assess qualities of adolescents' interactions during each task. Coders rated the adolescent and dyadic partner (friend or mother) separately. Adolescents' observed behaviors were of primary interest in the current study. The IDCS was originally designed to assess adult couples' interactions during a problem discussion and was slightly modified to make the scales more applicable to an adolescent

population. One scale - task avoidance, which assesses avoidance of the designated discussion topic, was added to the coding system. Coders rated each person's affect and behavior on ten scales on a five-point Likert scale with half-point intervals (1 = extremely uncharacteristic to 5 = extremely characteristic). The 10 scales were: a) positive affect; b) negative affect; c) problem-solving (ability to define a problem and work toward a satisfactory solution); d) denial (rejection of problem's existence or of personal responsibility); e) dominance (exertion of forceful control or power); f) task avoidance (avoidance of problem discussion through distraction or excessive humor); g) support-validation (positive listening and speaking skills that demonstrate support); h) conflict (disagreement and hostility); i) withdrawal (withdrawal from or avoidance of interacting with the other); and j) communication skills (ability to convey thoughts and feelings in a clear, constructive manner). Ratings were averaged across the four tasks.

On the basis of principal axis factor analysis with oblique rotation, three composites were derived from the 10 scales: 1) On Task, comprised of task avoidance (factor loading = -.80) and problem-solving (.55), 2) Conflict, containing conflict (.84), dominance (.75), and denial (.46), and 3) Communication Skills, consisting of communication skills (.75), withdrawal (-.86), positive affect (.97), negative affect (-.75), and support-validation (.70). Composites were calculated by averaging across scales.

Interactions were rated by coders naïve to other information about the participants. Inter-rater agreement was checked on 22% of all tasks coded and was found to be satisfactory. Intra-class correlation coefficients for composites ranged from .69 to .83. The on task composite was excluded from analyses in this study because of high correlations with the two other composites and to reduce errors with multi-collinearity.

Self-Report of Support and Negative Interactions (with friend and mother)

The *Network of Relationships Inventory: Behavioral Systems Version* (NRI; Furman & Buhrmester, 2009) (see Appendix) is a self-report questionnaire used to assess adolescents' perceptions of their relationships with mothers, fathers, a same-sex friend, an other-sex friend, and a romantic partner. The NRI assesses 8 domains of adolescents' relationships with each of the individuals in their network. Two factors derived from this questionnaire: support and negative interactions, each pertaining to teens' relationships with their mothers and the same close friend that participated in observational tasks, were used for the current study.

The Support factor assesses the general supportiveness of an adolescent's relationship and is derived from 15 items comprising five separate sub-scales: 1) Seeking Secure Base, 2) Seeking Safe Haven, 3) Providing a Secure Base, 4) Providing a Safe Haven, and 5) Companionship. The Negative Interactions factor assesses the level of negative interactions in a teen's relationship and is derived from nine items comprising three separate sub-scales: 1) Conflict, 2) Antagonism, and 3) Criticism. This questionnaire employs a 5-point Likert scale (1="Little or None"; 5="The Most"). The NRI has been widely used to assess relationship qualities, and there is good evidence for the reliability and validity of this measure as well as satisfactory internal consistency of all scales (Furman & Buhrmester, 2009).

Results

Data Preparation

All variables were examined to determine if the assumptions of univariate analyses were met (Behrens, 1997). All variables had acceptable levels of skew and kurtosis. Outliers were adjusted to fall 1.5 times the interquartile range below the 25th percentile or above the 75th percentile (i.e. to the whiskers in Tukey's (1977) boxplot).

Nine participants' data were removed from the sample as these participants had not reported on a romantic relationship in any of the five waves of data collection. The remaining 191 participants (96 females) had an average age of 15.9 years in 10^{th} grade (range = 14.45 – 17.43). Approximately 14% of the data for the remaining sample were found to be missing. Multiple imputation analyses were conducted with NORM (Schafer, 1997a, 1997b) as it has been documented that failure to adequately address missing data in an analysis will produce spurious results (Schafer, 1997a, 1997b). Multiple Imputation is believed to yield unbiased and efficient estimates and is considered superior to listwise deletion and mean substitution (Graham, Cumsille, & Elek-Fisk, 2003; Schafer & Graham, 2002). Five imputed copies of the data set were created. All preliminary and growth analyses were conducted on each of the five imputed datasets and the five sets of results for each analysis were aggregated to obtain the final estimates presented in this paper.

Descriptive statistics on all predictor and outcome variables are reported in Tables 1 and 2. Table 3 presents the correlations among predictor variables. Table 4 presents the

correlations between predictors and each of the outcome variables at T1. The patterns of relations between predictors and outcomes at the remaining 4 time points are relatively similar and are thus not reported here for the sake of simplicity.

Differences in Mean Levels of Conflict Resolution Strategies

A 5x5x2 double multivariate repeated measures ANOVA was conducted with the five conflict resolution variables at each of the five time points as within-subjects factors, and gender of respondent as a between-subjects factor. The analysis revealed the following significant effects: 1) main effect for conflict resolution (CR) strategy, $F(4,186) = 7.90$, $p < .001$, 2) main effect for time, $F(4,186) = 669.72$, $p < .001$, and 3) interaction effect for CR x time, $F(16, 174) = 6.63$, $p < .001$. However, there was not a significant main effect or any interaction effect with gender. These results indicate that, 1) there are differences in mean levels of the different CR behaviors within each time point, 2) that mean levels of each CR behavior vary across time points, and 3) that the pattern of differences in levels of CR behaviors varies across time points. Further, these results suggest that there are no gender differences in any of these effects. Thus, follow-up analyses were conducted for the combined sample of boys and girls.

A similar 5x5x2 double multivariate repeated measures ANOVA was conducted with ethnicity as a between-subjects factor. As a preliminary test for ethnic differences, ethnicity was coded as a dichotomous variable comparing White participants (i.e., majority) to all other minority ethnicities. As with gender, results indicated, 1) main effect for conflict resolution (CR) strategy, $F(4,186) = 6.89$, $p < .001$, 2) main effect for time, $F(4,186) = 547.84$, $p < .001$, and 3) interaction effect for CR x time, $F(16, 174) = 4.88$, $p < .001$, and neither a significant main effect nor any interaction effect with

ethnicity. Thus, as with gender, follow-up analyses were conducted for the combined sample of all ethnicities.

Paired samples *t*-tests were conducted to test for differences in mean levels of CR behaviors (note that the effects of time as identified above were examined later in growth models). As predicted, adolescents had significantly higher mean levels of problem solving than any other conflict resolution strategy as well as significantly higher mean levels of withdrawal and compliance than verbal aggression or physical aggression (see Table 2 for mean differences). These findings were obtained at all time points. Thus, adolescents reported engaging most frequently in problem solving behaviors and least frequently in aggressive behaviors at all time points. Additionally, at all but one time point (Time 3 – 12th grade) mean levels of withdrawal were significantly higher than mean levels of compliance.

Change in Conflict Resolution Strategies and Links with Hypothesized Predictors

Hierarchical linear modeling (HLM) was used to examine change in each of the conflict resolution strategies as well as to examine links with hypothesized predictors (HLM 6.03 software; Raudenbush, Bryk, & Congdon, 2004). HLM is particularly well suited to repeated measures analyses as well as analyses of data where there is unequal spacing between time points (Raudenbush & Bryk, 2002).

Overview of Latent Growth Curve Modeling

In the two-level hierarchical linear model, Level 1 (or intra-individual level) accounts for the nesting in time, given each individual participant was assessed at up to five time points. At this level, a linear pattern of change over time in each conflict resolution behavior was examined. Time 1 (10th grade) was set as the intercept or the

starting point for analyzing these growth curves. Level 2 (or the inter-individual level) accounts for variation among all participants. Upon determining significant variation in growth among participants, predictor variables were entered at this level to test how well they accounted for that variation.

Prior to examining effects of predictors, multiple preliminary steps were taken to assess adequate intra-class correlations (ICC) and reliability estimates of the initial status and slope. The ICC measures the proportion of variance in the outcome variable that is likely accounted for by the nested structure, and the reliability estimates indicate the likelihood that data are capable of detecting relations among person-level variables and growth estimates; the recommended cutoff for each is .10 (Bryk & Raudenbush, 1997; Luke, 2004; Raudenbush & Bryk, 2002; Repetto, Zimmerman, & Caldwell, 2008). All five outcomes met ICC and intercept reliability cutoffs. Slope reliabilities were greater than .10 except in the case of problem solving and physical aggression (.044 and .006 respectively). Due to the very low slope reliability for physical aggression, further analyses were not conducted with this variable. Initial models revealed that gender was not a significant predictor of any of the five outcome variables and was thus excluded from all models.

The final model was specified as:

Level 1: $(\text{Conflict Resolution Behavior})_{ti} = \pi_{0i} + \pi_{1i}(\text{Time})_{ti} + e_{ti}$

Level 2: $\pi_{0i} = \beta_{00} + \beta_{01}(\text{Socioeconomic Status})_j$

$+ \beta_{02}(\text{Conflict - Mother})_j + \beta_{03}(\text{Communication Skills - Mother})_j$

$+ \beta_{04}(\text{Conflict - Friend})_j + \beta_{05}(\text{Communication Skills - Mother})_j$

$+ \beta_{06}(\text{Support - Mother})_j + \beta_{07}(\text{Negative Interactions - Mother})_j$

$$+ \beta_{08}(\text{Support - Friend})_j + \beta_{09}(\text{Negative Interactions - Friend})_j$$

$$+ r_{0j}$$

$$\pi_{1i} = \beta_{10} + \beta_{11}(\text{Socioeconomic Status})_j$$

$$+ \beta_{12}(\text{Conflict - Mother})_j + \beta_{13}(\text{Communication Skills - Mother})_j$$

$$+ \beta_{14}(\text{Conflict - Friend})_j + \beta_{15}(\text{Communication Skills - Mother})_j$$

$$+ \beta_{16}(\text{Support - Mother})_j + \beta_{17}(\text{Negative Interactions - Mother})_j$$

$$+ \beta_{18}(\text{Support - Friend})_j + \beta_{19}(\text{Negative Interactions - Friend})_j$$

$$+ r_{1j}$$

Results of Latent Growth Curve Modeling

The results of unconditional growth models (i.e., modeling growth without the inclusion of predictors) and conditional growth models (i.e., including predictors) are described separately for each of the outcomes.

Positive problem solving. Unconditional growth modeling (see Table 5) examined change in problem solving over time. This analysis resulted in a significant mean intercept, significant variability in intercept, a significant positive mean slope, and non-significant variability in slope. As hypothesized, problem solving increased over time. Additionally, although there was meaningful inter-individual variability in intercept, there was no evidence for inter-individual variability in growth.

The final conditional analysis (see Table 6) examined the hypothesis that observed communication skills and self-reported support with mothers and friends would be positively related to problem solving. As the unconditional growth model resulted in non-significant variability in slope, no predictors of slope were entered at Level 2. Thus, this model examined predictors of intercept only. Only one significant predictor emerged;

self-reported negative interactions with friends was negatively related to problem solving. Thus, reporting lower levels of negative interactions with friends in 10th grade was associated with higher levels of problem solving in 10th grade.

Contrary to expectations, communication skills with mothers, communication skills with friends, self-reported support from mothers, and self-reported support from friends were not predictive of problem solving in 10th grade.

Withdrawal. Unconditional growth modeling (see Table 5) examined change in withdrawal over time. This analysis resulted in a significant mean intercept, significant variability in intercept, a significant positive mean slope, and significant variability in slope. Thus, contrary to expectations, withdrawal increased over time. Results indicated meaningful inter-individual variability in intercept as well as meaningful inter-individual variability in the rate of increase over time.

The final conditional growth analysis (see Table 7) examined the hypothesis that observed conflict and self-reported negative interactions with mothers and friends would be positively related to withdrawal. As predicted, self-reported negative interactions with friends was significantly positively related to intercept. Additionally, socioeconomic status and observed communication skills with mothers were significantly negatively related to intercept. Thus, being from higher socioeconomic backgrounds, being observed to be skilled in communication with mothers, and reporting lower levels of negative interactions with friends in 10th grade were associated with lower levels of withdrawal in 10th grade.

Contrary to expectations, observed conflict with mothers, observed conflict with friends, and self-reported negative interactions with mothers were not predictive of

withdrawal. Also contrary to expectations, none of the hypothesized predictor variables were predictive of variability in slope.

Compliance. Unconditional growth modeling (see Table 5) examined change in compliance over time. This analysis resulted in a significant mean intercept, significant variability in intercept, a non-significant mean slope, and significant variability in slope. Thus, contrary to expectations, compliance did not decrease over time. Results indicated meaningful inter-individual variability in intercept as well as meaningful inter-individual variability in the rate of change over time.

The final conditional growth analysis (see Table 8) examined the hypothesis that observed conflict and self-reported negative interactions with mothers and friends would be positively related to compliance. As predicted, self-reported negative interactions with friends was significantly positively related to intercept. Additionally, self-reported support from friends was significantly negatively related to slope. Thus, reporting higher levels of negative interactions with friends in 10^{th} grade was associated with higher levels of compliance in 10^{th} grade. Further, reporting lower levels of support from friends in 10^{th} grade was associated with increases in compliance over time.

Contrary to expectations, observed conflict with mothers, observed conflict with friends, and self-reported negative interactions with mothers were not predictive of intercept or slope. Surprisingly, self-reported support from mothers was significantly positively related to slope suggesting that teens who reported high levels of support from mothers in 10^{th} grade were more likely to increase their compliance behavior over time.

Verbal aggression. Unconditional growth modeling (see Table 5) examined change in verbal aggression over time. This analysis resulted in a significant mean

intercept, significant variability in intercept, a non-significant mean slope, and significant variability in slope. Thus, contrary to expectations, verbal aggression did not decrease over time. Results indicated meaningful inter-individual variability in intercept and inter-individual variability in rate of change.

The final conditional growth analysis (see Table 9) examined the hypothesis that observed conflict and self-reported negative interactions with mothers and friends would be positively related to verbal aggression. As predicted, observed conflict with friends was positively related to intercept, and self-reported negative interactions with friends was positively related to intercept. Additionally, observed communication skills with friends was significantly negatively related to slope. Thus, being observed to be highly conflictual with friends and reporting higher levels of negative interactions with friends in 10^{th} grade was associated with higher levels of verbal aggression in 10^{th} grade. Further, adolescents who were observed as being less skilled in communications with friends in 10^{th} grade were more likely to increase their verbal aggression behavior over time.

Contrary to expectations, observed conflict with mothers and self-reported negative interactions with mothers were not predictive of initial status or slope. Surprisingly, observed conflict with friends was significantly negatively related to slope. This finding should be interpreted with caution as it is likely the result of regression to the mean.

Discussion

The overarching goal of the current study was to identify features of adolescents' relationships with their mothers and close friends that predict conflict resolution strategies in romantic relationships. This study adds to existing literature in three ways. First, this study identifies differences in adolescents' use of multiple conflict resolution strategies including positive problem solving, withdrawal, compliance, verbal aggression, and physical aggression. Second, this study provides information about the developmental trajectory of these conflict resolution strategies and the intra-individual variation in extent of change over the course of late adolescence and early adulthood. Finally, this study presents links between teens' behaviors with mothers and close friends in 10th grade and conflict resolution strategies with romantic partners over the next four and half years.

Relative Use of Adaptive and Maladaptive Conflict Resolution Strategies

Consistent with prior research (Collins & Laursen, 1992; de Wied et al., 2007; Feldman & Gowen, 1998; Laursen et al., 2001) adolescents in this study engaged in aggressive behavior far less frequently than other strategies such as withdrawal, compliance, and positive problem solving. Furthermore, adolescents reported engaging most frequently in positive problem solving over the course of late adolescence and into early adulthood. In fact, the mean use of problem solving was almost twice that of all other conflict resolution strategies.

Other researchers have noted that in relationships with peers (including romantic partners) teens are likely to respond to conflict with behaviors that serve to maintain, rather than disrupt, the relationship (Adams & Laursen, 2001; Maccoby, 1996). Coercive strategies like verbal and physical aggression are most likely to end a peer relationship (Adams & Laursen, 2001). This may be particularly true among romantic partners in the early stages of their relationships when partners have not yet made great investments in the relationship. Thus, it is not surprising that teens in the current study engage in coercive behaviors the least. Although problem solving is a clearly adaptive response to conflict, behaviors like withdrawal and compliance may also protect the romantic relationship from dissolution, at least in the short term. However, these strategies may be maladaptive in that teens do not learn to express their own needs nor are they likely to find a long-term solution to relationship conflict. Future work in this area might examine the personal and relationship consequences of engaging in different conflict resolution strategies to better understand whether, and in what contexts, behaviors like withdrawal and compliance are maladaptive.

It should be noted that teens self-reported about their behaviors during conflict with romantic partners. Thus, as positive problem solving is clearly the most socially desirable response, it is possible that teens may have over-reported their use of problem solving behavior. However, discrepancies between self-reports of conflict resolution behavior and actual behavior that are readily observed among children and early adolescents tend to diminish in late adolescence (Laursen, 1998) which supports the validity of the current findings.

The current study enhances prior research by providing information about a wider range of conflict resolution strategies with romantic partners than is typically reported. Most research in this area has focused on physical or verbal/emotional aggression (e.g., Andrews et al., 2000; Arriaga & Foshee, 2004; Capaldi et al., 2001; Wolfe et al., 2004). Additionally, prior work examining a variety of CR strategies had typically done so at a single time point (e.g., Feldman & Gowen, 1998). The current findings confirm that teens tend to engage in a multitude of conflict resolution behaviors and report engaging in aggressive behaviors to a lesser degree than other behaviors for the duration of late adolescence and into early adulthood.

Change in Conflict Resolution Behavior in Late Adolescence and Early Adulthood

Linear latent growth curve analyses conducted in the current study using hierarchical linear modeling revealed a significant increase in positive problem solving and withdrawal over time, and no change in compliance or verbal aggression. Some of these findings were consistent with expectations based on prior work, but other findings were unexpected.

Prior cross-sectional research suggests that conflict resolution skills increase with age and that adolescence is marked by a shift from maladaptive conflict management strategies to adaptive strategies (see de Wied et al., 2007). Additionally, prior work suggests that teens are likely to become more skilled with romantic conflict resolution as they gain greater experience in this domain (Laursen, 1996; Laursen et al., 2001). Thus, it was expected that the analyses in the current study would find an increase in positive problem solving behavior over time and a decrease in withdrawal, compliance, verbal aggression, and physical aggression.

As expected, positive problem solving increased steadily over the course of late adolescence and into early adulthood. These results suggest that, on average, adolescents increase their use of problem solving with romantic partners at approximately the same rate over the course of late adolescence. These results are consistent with findings that older adolescents are more skilled in negotiation (Laursen et al., 2001) and compromise (Feldman & Gowen, 1998; Owens et al., 2005), key components of positive problem solving, than younger adolescents or children.

The increase in withdrawal over time was unanticipated. In fact, the reverse was expected based on the idea that adolescents shift from the use of maladaptive conflict strategies to adaptive strategies which should promote the integration of developmentally appropriate intimacy goals with independence goals (Laursen, 1995). However, this finding is not wholly inconsistent with prior research. In their meta-analysis, Laursen and colleagues (2001) presented evidence for incremental increases in the use of *disengagement*, described as inclusive of withdrawal and/or shifting focus, across successive age groups. They suggest that such behaviors may reflect attempts to "walk away" from a dispute, an adaptive way to handle conflict, and that increases in disengagement, withdrawal, or avoidance may actually represent improvements in adolescents' conflict resolution skills. The items used to assess withdrawal in this study were generally negatively valenced; that is, it is unlikely that they would be interpreted by participants as adaptive behaviors; however, in future studies, it may be useful to assess whether teens who withdraw in the midst of a conflictual situation are able to resolve issues appropriately at a later time. Such a finding would support the idea that withdrawal behavior in the throes of conflict might not be particularly maladaptive.

Contrary to expectations based on theoretical considerations (e.g., Laursen, 1996; Laursen et al., 2001), there were no statistically significant changes in compliance or verbal aggression over time. To the best of my knowledge, no prior studies have specifically examined age-related differences in compliance, particularly in the context of romantic relationships. Thus, the current findings represent new information that needs further exploration. With regards to aggression, prior research has indicated that coercive behaviors with friends and siblings occur to a greater extent among younger adolescents than among older adolescents (Laursen et al., 2001). However, no research thus far has examined intra-individual change in coercive behaviors in teens' romantic relationships (Laursen et al., 2001). It is possible that decreases in compliance and verbal aggression do not happen until somewhat later in the developmental cycle. Although adolescents have had considerable experience managing conflict resolution with other intimate peers: close friends (Laursen, 1995; von Salisch & Vogelgesang, 2005), it is possible that in late adolescence, teens are as yet uncertain about the most adaptive ways of handling conflict with romantic partners and thus continue to engage sporadically in compliance or even coercive strategies. Further research could test this idea by comparing trajectories of change in these conflict resolution strategies with close friends and with romantic partners. It could also be useful to extend the examination of these trajectories further into early adulthood to see whether decreases in these behaviors are observed later in development.

It should be noted that teens are unlikely to use any one conflict resolution strategy in isolation from others; rather, they are likely to use varying combinations of a number of different conflict resolution strategies (Branje, van Doorn, van der Valk, &

Meeus, 2009). The degree to which one strategy is used in combination with others may be an important factor to consider when determining change in conflict resolution skill over time. Thus, our understanding of how conflict resolution skills develop and improve could benefit from future research that examines teens' relative growth across different strategies.

Prior research on adolescent romantic conflict resolution strategies has been limited by age group comparisons or by restricted samples (for example, at-risk boys or undergraduate students) and has not examined trajectories of change. Little data exists that directly examines the developmental nature of conflict resolution skills and strategies (Laursen et al., 2001). Thus, the current findings bolster theoretical considerations (e.g., Sandy & Cochran, 2000) as well as limited extant empirical evidence (e.g., Laursen et al., 2001) that problem solving behavior increases over time. These findings also provide new information, albeit preliminary until replicated, about trajectories of change for withdrawal, compliance, and aggression in the context of conflict in an adolescent romantic relationship.

Maternal and Peer Effects on Initial Status and Change in Conflict Resolution Behavior

In the case of withdrawal, compliance, and verbal aggression, analyses indicated that there was marked variability among adolescents in the degree to which these behaviors increased. Where withdrawal is concerned this finding indicates that whereas some teens do indeed increase markedly over time, others may increase slightly or perhaps not at all. Where compliance and verbal aggression are concerned these findings suggest that some teens are more likely to change in these behaviors over time than others. The variability in rate of increase also suggests that teens' engagement in

withdrawal, compliance, and verbal aggression are likely influenced by intra-personal or situational/contextual characteristics.

Socialization theories propose that family and peer relationships, which are the context for much social and emotional development, serve as a training ground for conflict resolution, an essential component of any relationship (Conger et al., 2000; Laursen, 1995; Linder & Collins, 2005; Stein & Albro, 2001). Thus, the current study examined the notion that teens' conflict resolution with romantic partners is predicted by behaviors exhibited in prior interactions with their mothers and close friends as well as by features of those relationships that may either nurture or hinder the development of skills in this domain. The current findings support this notion and suggest that adolescents' conflict resolution behaviors with romantic partners are indeed predicted by their interactions with mothers and close friends.

Analyses revealed a number of predictors of the initial intercept. Socioeconomic status appeared to be a protective factor in that teens with higher socioeconomic status reported lower levels of withdrawal during conflict with a romantic partner in 10^{th} grade. Features of teens' interactions with *mothers* were associated with initial status in only one instance: teens observed to be less skilled in communication with mothers reported higher levels of withdrawal with a romantic partner in 10^{th} grade. By contrast, features of teens' interactions with *close friends* were associated with initial status in five instances. In the first four instances, teens who reported higher levels of negative interactions with friends reported lower levels of positive problem solving, higher levels of withdrawal, higher levels of compliance, and higher levels of verbal aggression. Fifth and last, teens who

were observed to be highly conflictual with friends reported high levels of verbal aggression.

These findings validate prior work that has linked teens' behaviors across intimate relationships and also provide new information (Darling, et al., 2008; Linder & Collins, 2005; Shute & Charlton, 2006; Furman & Shomaker, 2007). In the current study teens rated as being less skilled in communication with mothers reported higher levels of withdrawal during conflict with romantic partners. Some parents are likely more able than others to encourage open and constructive communication with teenage children than others. Teenagers that do not have this opportunity with their mothers are perhaps more likely to develop feelings of helplessness in response to conflict in other intimate relationships which may lead them to shut down or disengage as a means to escape the situation. Further research is needed to examine these ideas.

As with previous work in this area (Arriaga & Foshee, 2004; Capaldi et al., 2001; Dishion, et al., 1997), *negative* features of friendships were particularly related to behaviors in romantic relationships. Additionally, it is noteworthy that teens' self reports of negative interactions with friends, i.e., their perceptions of the degree of conflict, antagonism, and criticism, were linked with all four conflict resolution strategies examined. By contrast, observed conflict with friends was only predictive of verbal aggression. This difference could be attributable to the fact that teens' conflict resolution strategies were also assessed through self-reports; additional research using both observed and self-reported assessments of conflict resolution strategies is needed to better understand this difference in findings.

The greater number of friend effects than mother effects suggest that in mid – late adolescence features of teens' relationships with friends may be more predictive of conflict resolution in concurrent romantic relationships than features of teens' relationships with mothers. Although this idea has been shown in earlier work (Arriaga & Foshee, 2004; Linder & Collins, 2005) the current study bolsters the literature by examining observational as well as self-report indices of predictor variables. Other researchers have noted that although there are similarities across intimate relationships with parents, siblings, friends, and romantic partners, peer relationships (i.e., with friends and romantic partners) share several points of similarity that are distinct from familial relationships. In particular, peer relationships are *voluntary* and partners tend to share power more so than in obligatory parent-child relationships and many sibling relationships (Furman & Shomaker, 2008; Laursen et al., 2001). Thus, it is likely that there is greater similarity in interpersonal behaviors and strategies utilized in contexts where teens are jointly responsible for maintaining the relationship with their partners (e.g., romantic relationships and friendships).

However, theorists suggest that whereas early romantic relationships can be very similar to friendships this may not be the case with romantic relationships in late adolescence and adulthood. As teens get older they become more likely to engage in longer relationships that are characterized by increasing levels of investment (Furman & Collins, in press). These romantic relationships can come to resemble relationships with parents in that they feel less voluntary (Laursen & Jensen-Campbell, 1999) and are characterized by greater amounts of conflict than early relationships which were focused on fun and affiliative goals (Canary, Cupach, & Messman, 1995; Furman & Wehner,

1994; Laursen & Collins, 1994). Thus, it is possible that features of relationships with parents are a better long-term predictor of conflict resolution behavior in romantic relationships than friendships. The longitudinal design of this study was well-poised to examine this idea.

Results actually indicated that teens' interactions with their close friends and mothers were predictive of growth in a similar number of instances. With regards to *close friends* two main results were obtained. First, teens who reported lower levels of support from friends in 10th grade were more likely to increase in compliance behavior. Second, teens who were rated lower on communication skills during observed interactions with their friends in 10th grade were more likely to increase in verbal aggression over subsequent years. These findings highlight the importance of positive features of teen friendships as predictors of later conflict resolution in romantic relationships. Prior research has primarily linked negative features of friendships with negative features in romantic relationships like the presence or absence of conflict, denial, coercion (Arriaga & Foshee, 2004; Shute & Charlton, 2006). The current findings suggest that friendship features like supportiveness and communication skills, or the lack thereof, may also be important in the development of conflict resolution strategies.

One additional finding was that teens observed to engage in lower levels of observed conflictual behavior with friends in 10th grade appeared more likely to increase in verbal aggression over time. This finding should be interpreted with caution as it is likely the result of regression to the mean given that high level of observed conflict with friend was associated with high level of verbal aggression in 10th grade.

With regards to the effects of interactions with *mothers* on change in conflict resolution behaviors with romantic partners, one rather surprising result was obtained. Teens who reported higher levels of support from their mothers in 10th grade appeared more likely to increase in compliance over time. It may be that relationships with mothers that are marked by high levels of support provide teens with little experience with discord and the need for conflict management. Teens may then be unfamiliar in situations of conflict and be more eager to smooth things over by being overly compliant than teens more comfortable with the course of conflict and conflict management. Alternatively, this finding suggests that teens with non-supportive mothers show decreases in compliance. Thus, teens who experience a lack of support in their early intimate relationships may develop compensatory tendencies to be confrontive rather than conciliatory. Future work is needed to replicate this finding and to examine these potential explanations for the finding.

It should be noted that the current study examined development from around age 15 into just the early phases of adulthood, approximately age 20, and few of the participants were in committed relationships even by the last time point of data collection. Thus, it would be important to extend the examination of trajectories and effects of parent and peer predictors on these trajectories into later years as well as to account for the level of commitment in romantic relationships.

One final consideration here is that socioeconomic status was found to be related to only one conflict resolution strategy: withdrawal. Towards the later years of the larger study it was noted that the group of adolescents observed since 10th grade had a higher proportion of college-educated individuals than would be expected for the local

population of similarly aged individuals. Thus it is possible that the range of socioeconomic status among participants was somewhat limited which thus impacted the likelihood of finding associations with the outcome variables.

Gender Differences

There was no evidence for gender difference in the use of any of the conflict resolution strategies at any time during late adolescence and early adulthood. Additionally, growth trajectories did not vary by gender. Prior research in this area has resulted in mixed findings wherein some studies find gender differences but others do not (Capaldi & Crosby, 1997; de Wied, et al., 2007; Feldman & Gowen, 1998; Gray & Foshee, 1997; Owens et al., 2005; Wolfe, Scott, & Crooks, 2005). It is possible that the lack of gender differences in this study is related to the type of relationship being examined and certain sample characteristics. For instance, the current sample examines conflict resolution with a romantic partner in a normative, community sample. By contrast, many of the studies reviewed here examined conflict resolution in friendships (e.g., de Wied, et al., 2007; Owens et al., 2005) or among at-risk or aggressive teens (e.g., Capaldi & Crosby, 1997; Gray & Foshee, 1997; Wolfe, Scott, & Crooks, 2005).

Connolly and colleagues (2009) find that upon entering into the realm of cross-gender romantic relationships, the average teen tends to adopt conflict management strategies typically associated with other-gender peers, specifically, girls become more aggressive and boys become more conciliatory. By comparison, in friendships, teens were far more likely to behave in gender normative ways, i.e., girls' friendships were marked by more compromise and less aggression than boys' friendships. Thus, the lack of gender differences in the current study may, on the one hand, reflect teens' attempts to

behave in ways more typical of other-gender peers. On the other hand, in an at-risk sample, characterized by experiences of violence, victimization, or poor psychological health, teens' conflict resolution behaviors though related to partner's behaviors (Capaldi & Owen, 2001) may be less influenced by involvement in a romantic relationship. Thus, in a community sample, like the current one, male and female adolescents may indeed engage in similar levels of adaptive and maladaptive conflict resolution strategies. Future research that examines whether gender interacts with characteristics like victimization or mental health history to predict conflict resolution behavior could help explain this discrepancy in the literature.

Limitations & Future Directions

Although the current study has advanced prior research by examining a range of conflict resolution strategies in a community sample of teens using observational and self-report data with a longitudinal design, a number of limitations exist with implications for future research.

First, although the inclusion of both observational and self-reported predictor variables strengthened the validity of study findings, the outcome variables (i.e., conflict resolution behavior) were measured by adolescent self-report. This limited the ability to interpret certain patterns in the data such as the seemingly greater number of associations between self-reported negative interactions in teens' friendship and conflict resolution outcomes than between observed conflict with friends and conflict resolution outcomes. Thus, one direction for future research is to examine both self-reports and observations of teens' conflict resolution behavior in romantic relationships over the course of late adolescence and early adulthood.

Second, although the use of latent growth curve modeling to examine trajectories of change is an improvement on cross-sectional and retrospective designs, this method of analysis does have certain limitations. For example, this analytic model assumes that a single underlying pattern of change describes all individuals (Young et al., in press). Given the variability in slopes in the current study that were not always fully predicted by predictors in this study (especially withdrawal and compliance) growth mixture modeling might better identify subgroups of teens with different trajectories of change.

Third, the current study, like other studies in this area, examined each of the different conflict resolution strategies separately. Although this is a useful strategy for determining the incidence and change in particular behaviors, it limits conclusions about teens' overall conflict resolution skill. For example, the current study could not distinguish between teens engaging in high problem solving + high withdrawal + low verbal aggression and teens engaging in high problem solving + low withdrawal + low verbal aggression. It is likely that teens differ in their relative use of each conflict resolution behavior. Examining changes in the degree to which one strategy is used as a proportion of all strategies used might also be an area for future study. Research examining such patterns could further add to our understanding of how teens respond to conflict with partners.

Fourth, the goal of the current study was to examine the general development of conflict resolution skill among an average sample of teenagers. Thus, analyses centered on identifying variations in the 10^{th} grade level, and change from that point on, of various conflict resolution strategies while holding constant certain demographic features. In addition to validating the current findings, future work might consider the effects of

additional variables such as the amount of conflict in teens' romantic relationships or the length of teens' romantic relationships. Variables like these may influence teens' use of conflict resolution strategies and may also moderate the effect of parent and peer interactional variables (Kim & Capaldi, 2004; Laursen, 1998; Laursen, Coy, & Collins, 1998).

Fifth, the current study did not examine features of communication with fathers. Fathers have been historically underrepresented in research with children and adolescents (Phares, 1995); however, some preliminary research has been conducted that examines the independent effects of interactions with mothers and fathers on teens' romantic relationships. For example, in a cross-sectional study of within-family conflict on adolescents' conflict resolution with romantic partners, Darling and colleagues (2008) found similar associations between behaviors exhibited with mothers and fathers and behaviors exhibited with romantic partners. An additional consideration is that with heterosexual teens (like most of this study's participants) conflict and conflict resolution with the opposite-sex parent may be most similar to these experiences and behaviors with opposite-sex romantic partners. Thus, further research is needed to validate the findings of this study and also to examine whether there are differing longitudinal effects of interactions with an other-sex and/or same-sex parent on conflict resolution with romantic partners.

Last, it should be noted that this study solely examined the predictive power of prior interactions with mothers and friends on behavior with romantic partners. Although the longitudinal design of this study lends validity to the findings, it is possible that some variable not examined in this study may be responsible for the associations noted. For

example, it is possible that intra-individual factors such as cognitive ability or anti-social behavior predict and influence parenting and friendships, as well as later behaviors with intimate partners (South, Krueger, Johnson, & Iacono, 2008).

Concluding Comments

Findings from the current study provide a unique contribution to the literature and enhance our knowledge of the development of adolescent romantic conflict resolution in late adolescence in multiple ways. Results indicate that teens engage in positive problem solving, withdrawal, and compliance far more frequently than in aggressive conflict resolution strategies. This study provides evidence for the developmental increase in positive problem solving skill over time. Findings also suggest that withdrawal behavior increases over time but that levels of compliance, verbal aggression, and physical aggression stay the same on average. Lastly, although teens' negative interactions and observed conflict with friends appear particularly predictive of conflict resolution behavior in 10^{th} grade, support and communication skills with friends and mothers are predictive of conflict resolution behavior over time.

These results support interventions that target teens' relationships with peers and parents (Sobol, 2001; Van Slyck et al., 1996). Being able to communicate effectively with mothers and close friends and having friendships that are supportive and not conflictual appear to improve teens' odds for dealing adaptively with conflict with a romantic partner. Teens are certainly presented with a great number of opportunities to communicate needs and negotiate differences with parents and peers (Adams & Laursen, 2001; von Salisch & Vogelgesang, 2005); thus, targeting these relationships may indeed improve adolescents' romantic relationships in the near, and possibly distant, future.

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Appendix

Table 1
Descriptive Statistics for Predictor Variables

	Mean	SD	N
Gender	1.50	0.50	191
Socioeconomic Status	-0.02	0.83	191
Dyadic Interaction - Mother			
Conflict	1.52	0.46	191
Communication skills	3.28	0.62	191
Dyadic Interaction - Friend			
Conflict	1.33	0.25	191
Communication skills	3.57	0.48	191
Relationship Characteristics - Mother			
Support	3.16	0.95	191
Negative Interactions	2.29	0.91	191
Relationship Characteristics - Friend			
Support	3.5	0.96	179
Negative Interactions	1.79	0.74	179

Table 2
Means and Standard Deviations of Conflict Resolution Strategy Scores by Time Point

	Time Point				
	Time 1	Time 2	Time 3	Time 4	Time 5
Problem Solving	4.31 (1.60)[1]	4.42 (1.61)[1]	4.27 (1.63)[1]	4.75 (1.66)[1]	4.69 (1.46)[1]
Withdrawal	2.52 (1.24)[2]	2.34 (1.26)[2]	2.31 (1.26)[2]	2.70 (1.42)[2]	3.05 (1.73)[2]
Compliance	2.27 (1.09)[3]	2.09 (1.08)[3]	2.47 (1.45)[2]	2.40 (1.28)[3]	2.38 (1.31)[3]
Verbal Aggression	1.83 (.95)[4]	1.92 (.93)[4]	1.96 (1.12)[3]	1.99 (1.02)[4]	1.98 (1.02)[4]
Physical Aggression	1.14 (.31)[5]	1.21 (.41)[5]	1.25 (.52)[4]	1.24 (.39)[5]	1.15 (.32)[5]

Note. N = 191. The numbers in parentheses are standard deviations. The numbers in superscripts indicate the rank order of the means across strategies within each time point. Means with different number ranks in the same column are significantly different from each other.

Table 3
Correlations among All Predictor Variables

	2	3	4	5	6	7	8	9	10
1. Gender	-.17*	.02	.15*	-.06	.29**	.09	.02	.23**	-.07
2. Socioeconomic Status		-.21**	.07	-.19*	.04	-.17*	.03	-.09	.01
3. Conflict – Mother			-.60**	.22**	-.10	-.11	.33**	-.08	.07
4. Communication Skills – Mother				-.24**	.34**	.22**	-.34**	.15*	-.13
5. Conflict – Friend					-.40**	-.01	.22**	.06	.16*
6. Communication Skills – Friend						.04	-.14*	.20**	-.15*
7. Support - Mother							-.23**	.35**	.10
8. Negative Interactions - Mother								-.02	.30**
9. Support - Friend									.01
10. Negative Interactions - Friend									1.00

Note. N = 191 for each analysis except with variables 10 & 11 for which N = 179.
* $p < .05$. ** $p < .01$.

Table 4
Correlations between Predictor Variables and Outcome Variables (Time 1 only)

	Problem Solving	Withdrawal	Compliance	Verbal Aggression	Physical Aggrssion
Gender	0.02	0.05	-0.04	0.03	-0.17*
Socioeconomic Status	0.14*	-0.04	0.07	-0.01	0.10
Dyadic Interaction - Mother					
Conflict	-0.21**	0.14*	-0.05	0.11	0.09
Communication Skills	0.17*	-0.18*	-0.03	-0.12	-0.10
Dyadic Interaction - Friend					
Conflict	-0.15*	0.17*	-0.02	0.23**	0.17*
Communication Skills	0.22**	-0.03	0.06	-0.07	-0.15*
Relationship Characteristics- Mother					
Support	0.05	0.05	-0.09	-0.02	-0.01
Negative Interactions	-0.17*	0.26**	0.08	0.21**	0.23**
Relationship Characteristics - Friend					
Support	0.05	0.04	-0.01	-0.01	-0.04
Negative Interactions	-0.26**	0.23**	0.19*	0.21**	0.11

Note. N = 191 except with in the case of ‘support - friend’ and ‘negative interactions – friend’ for which N = 179.
* $p < .05$. ** $p < .01$.

Table 5
Mean and Variability Estimates for Conflict Resolution Behaviors from Unconditional Growth Models

	Means Estimates			Variability Estimates		
	Coefficient	*se*	*t Ratio*	*Variance Component*	*df*	*Chi-sq*
Problem Solving						
Intercept	4.27	0.10	42.45**	0.89	190	347.21**
Slope	0.11	0.03	3.48**	0.01	190	192.46
Withdrawal						
Intercept	2.30	0.08	28.75**	0.35	190	265.25**
Slope	0.14	0.03	4.09**	0.08	190	297.97**
Compliance						
Intercept	2.22	0.07	30.13**	0.36	190	291.56**
Slope	0.05	0.03	1.83	0.04	190	262.91**
Verbal Aggression						
Intercept	1.86	0.06	30.86**	0.24	190	291.24**
Slope	0.04	0.02	1.72	0.01	190	222.08*
Physical Aggression						
Intercept	1.19	0.02	51.42**	0.02	190	222.72*
Slope	0.00	0.01	0.47	0.00	190	168.36

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

Table 6
Final Model for Problem Solving

	Fixed Effect					
	Mean initial status, β_{00}			Mean growth rate, β_{10}		
	Coeff	*se*	*t Ratio*	*Coeff*	*se*	*t Ratio*
Intercept	3.23	1.08	2.99**	0.11	0.03	3.45**
SES	0.12	0.09	1.23	-	-	-
Conflict – Mother	-0.05	0.21	-0.23	-	-	-
Communication Skills – Mother	0.31	0.17	1.86	-	-	-
Conflict – Friend	-0.39	0.35	-1.12	-	-	-
Communication Skills – Friend	0.32	0.18	1.74	-	-	-
Support - Mother	0.00	0.09	0.02	-	-	-
Neg Interactions - Mother	-0.06	0.09	-0.62	-	-	-
Support – Friend	0.02	0.09	0.25	-	-	-
Neg Interactions - Friend	-0.28	0.11	-2.59**	-	-	-

	Random Effect		
	Variance Component	*df*	*Chi-sq*
Initial status	0.78	169.00	297.83**
Growth rate	0.01	178.00	176.99
Level – 1 error	1.75		

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

Table 7
Final Linear Growth Model for Withdrawal

	Fixed Effect					
	Mean initial status, β_{00}			Mean growth rate, β_{10}		
	Coeff	*se*	*t Ratio*	*Coeff*	*se*	*t Ratio*
Intercept	0.96	1.12	0.86	0.89	0.52	1.72
SES	-0.25	0.10	-2.50*	0.03	0.05	0.66
Conflict – Mother	-0.27	0.22	-1.21	0.03	0.10	0.33
Communication Skills – Mother	-0.47	0.17	-2.69**	0.02	0.08	0.27
Conflict – Friend	0.68	0.37	1.87	0.03	0.17	0.16
Communication Skills – Friend	0.33	0.19	1.74	-0.15	0.09	-1.67
Support - Mother	0.08	0.09	0.88	0.00	0.04	-0.06
Neg Interactions - Mother	0.16	0.10	1.59	-0.07	0.05	-1.48
Support – Friend	0.01	0.09	0.12	-0.04	0.04	-1.04
Neg Interactions - Friend	0.29	0.11	2.61*	-0.03	0.05	-0.53

	Random Effect		
	Variance Component	*df*	*Chi-sq*
Initial status	0.18	169.00	203.27*
Growth rate	0.08	169.00	259.42**
Level – 1 error	1.47		

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

Table 8
Final Linear Growth Model for Compliance

	Fixed Effect					
	Mean initial status, β_{00}			Mean growth rate, β_{10}		
	Coeff	*se*	*t Ratio*	*Coeff*	*se*	*t Ratio*
Intercept	1.44	1.08	1.34	0.32	0.41	0.77
SES	-0.10	0.09	-1.02	0.00	0.04	-0.09
Conflict – Mother	-0.29	0.21	-1.37	0.08	0.08	1.02
Communication Skills – Mother	-0.23	0.17	-1.37	0.01	0.06	0.21
Conflict – Friend	0.29	0.35	0.82	-0.12	0.13	-0.85
Communication Skills – Friend	0.29	0.18	1.57	-0.05	0.07	-0.67
Support - Mother	-0.13	0.09	-1.42	0.08	0.03	2.44*
Neg Interactions - Mother	0.07	0.10	0.77	0.03	0.04	0.88
Support – Friend	0.03	0.09	0.35	-0.09	0.03	-2.80**
Neg Interactions - Friend	0.38	0.11	3.51**	-0.08	0.04	-1.89

	Random Effect		
	Variance Component	*df*	*Chi-sq*
Initial status	0.29	169.00	242.68**
Growth rate	0.03	169.00	215.54**
Level – 1 error	1.14		

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

Table 9
Final Linear Growth Model for Verbal Aggression

	Fixed Effect					
	Mean initial status, β_{00}			Mean growth rate, β_{10}		
	Coeff	*se*	*t Ratio*	*Coeff*	*se*	*t Ratio*
Intercept	-0.13	0.85	-0.15	0.99	0.31	3.16**
SES	-0.06	0.07	-0.83	0.02	0.03	0.67
Conflict – Mother	0.08	0.17	0.49	-0.04	0.06	-0.65
Communication Skills – Mother	-0.06	0.13	-0.43	-0.04	0.05	-0.92
Conflict – Friend	0.99	0.28	3.57**	-0.32	0.10	-3.11**
Communication Skills – Friend	0.08	0.15	0.54	-0.12	0.05	-2.19*
Support - Mother	0.01	0.07	0.13	0.01	0.03	0.40
Neg Interactions - Mother	0.10	0.08	1.30	-0.02	0.03	-0.70
Support – Friend	-0.03	0.07	-0.40	0.02	0.02	0.80
Neg Interactions - Friend	0.17	0.09	1.96*	0.01	0.03	0.26

	Random Effect		
	Variance Component	*df*	*Chi-sq*
Initial status	0.15	169.00	220.89**
Growth rate	0.01	169.00	181.07
Level – 1 error	0.77		

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