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The Relation of Insecure Attachment States of Mind and Romantic Attachment Styles to Adolescent Aggression
in Romantic Relationships

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Abstract

The relation of attachment states of mind and self reported attachment relationship styles to romantic partner aggression was examined in a community sample of 93 adolescents. Higher levels of insecure-preoccupied and insecure-dismissing states of mind, as assessed by the Adolescent Attachment Interview at age 14, were predictive, respectively, of perpetration and victimization of psychological aggression in romantic relationships four years later. Partners' romantic attachment anxiety was linked to both psychological and physical aggression perpetration in romantic relationships. Results are interpreted as suggesting the value of assessing aggression in adolescent romantic relationships in the context of broader patterns of regulation of affect and behavior via the attachment system.

Keywords: insecure attachment, partner aggression, romantic relationships, adolescence, working models

The Relation of Insecure Attachment States of Mind and Romantic Attachment Styles to Adolescent Aggression in Romantic Relationships

As attachment research has developed, two approaches to understanding and assessing attachment-related affect and cognitions have emerged. One approach is generally utilized in the social and personality psychology literature, and places a focus on self-reported thoughts and feelings of self and others in the romantic context (Hazan & Shaver, 1987; Bartholomew & Horowitz, 1991). The other approach is generally emphasized in developmental psychology, and utilizes attachment interviews to assess internal representations of attachment based on the coherence and consistency of their description of early caregiver experiences (Furman, Simon, Shaffer, & Bouchey, 2002; Furman & Wehner, 1994; George, Kaplan & Main, 1996). Although interview techniques that tap mental representations of relationships have shown great value, particularly in beginning to counter social-desirability biases from self-report data, (Furman et al, 2002; Jacobvitz, Curran, & Moller, 2002; Main, Hesse, & Goldwyn, 2008), individuals' explicit and consciously-reportable expectations about intimate relationships are also likely to have important meaning in understanding social behavior.

Attachment styles that tap self-reported behaviors and expectations in the *romantic* context might be more directly related to maladaptive relationship dynamics because these measures are romantic relationship-specific. Recent findings from both a recent meta-analysis and additional study have demonstrated that the empirical overlap between interview based attachment representations and self reported romantic attachment styles is only trivial to small (Fortuna & Roisman, 2008; Roisman et al., 2007), suggesting that each tradition of attachment research captures relatively independent aspects of cognition and affect in attachment relationships. Furthermore, a recent study by Fortuna & Roisman (2008) found that while AAI insecure attachment states of mind were associated with psychopathological symptoms for individuals experiencing higher stress, self-reported attachment styles were strongly associated with heightened psychopathology, *regardless* of level of experienced stress. This finding supports the utility of considering both attachment traditions in a single study, as different attachment constructs may contribute to behavioral outcomes in distinct ways. Therefore, in the

current study, we incorporated both interview methods and self-report methods so as to examine the value of utilizing different methodologies of attachment in predicting specific qualities of romantic relationships in adolescence.

The Adult Attachment Interview and relationship outcomes

Several factors suggest that interview-based assessments of states of mind with respect to attachment are likely to be linked to behavior in intimate relationships. Bowlby (1969) proposed that individuals develop internal working models of the self and of significant others, which are formed based on one's early experiences and expectations of caregiver availability. These working models can be assessed in adolescence and adulthood through coded interviews about experiences in attachment relationships, and are believed to be tied to emotion regulatory processes that help the individual manage affect and behavior when dealing with (or thinking about) attachment-related issues (Main et al., 2008; Jacobvitz et al., 2002).

More specifically, secure states of mind are characterized by a valuing yet objective view of attachment relationships, balanced with a clear sense of individualized identity and autonomy. Secure attachment states of mind have been related to outcomes ranging from social competence with peers, constructive regulation of emotion during tasks with spouses and higher romantic relationship quality, as well as inversely related to depressive symptoms and externalizing behavior (Allen, Moore, Kuperminc, & Bell, 1998; Allen, Porter, McFarland, McElhaney, & Marsh, 2007; Hare, Miga, & Allen, in press; Kobak & Hazan, 1991; Kobak & Sceery, 1988; Roisman, Collins, Sroufe, & Egeland, 2005).

While previous research has established a link between attachment states of mind and emotional and behavioral dysregulation across several contexts, fewer studies have examined associations between insecure attachment states of mind and conflict management in the romantic domain. Bowlby (1973) asserted that “threats of separation and other forms of rejection, are seen as arousing, in a child or adult, both anxious and angry behaviour” (p.253). When conflict arises in the romantic context, an individual with a more insecure internalized working model of attachment may be particularly attuned to the notion of their romantic partner abandoning the relationship and may subsequently act out against their partner—a phenomenon that has been labeled “intimacy anger” (Dutton, Saunders, Starzomski, & Bartholomew, 1994).

While the expression of anger and aggression as an attachment-related phenomenon has been considered from a theoretical perspective, less is known about the links between conflict negotiations and specific *subtypes* of attachment insecurity from an empirical perspective. There is some preliminary empirical evidence that one form of insecurity--preoccupation with attachment--may be particularly predictive of future aggressive behaviors. An insecure-preoccupied state of mind reflects a state of undercontrolled emotion (i.e. vacillations between expressions of love and anger), and wandering, confused thought patterns when reflecting on attachment experiences (Main & Goldwyn, 1998). Men classified as more preoccupied with respect to attachment were more likely to be classified as violent, and more likely to become violent when their partners attempted to withdraw during a laboratory argument than were more secure or insecure-dismissing men (Babcock, Jacobson, Gottman, & Yerington, 2000; Holtzworth-Munroe, Stuart, & Hutchinson, 1997). However, Creasey's (2002) study of college students and their romantic partners failed to find significant differences between insecure-dismissing and insecure-preoccupied individuals regarding negative conflict strategies.

Although the relationship between both an overall insecure attachment state of mind, and more insecure-attachment preoccupation and negative relationship outcomes has received some empirical attention, less consideration has been given to the relationship between insecure-dismissing attachment states of mind and specific romantic relationship qualities over time. An insecure-dismissing state of mind is characterized by derogation of attachment, minimization of valuing emotions, lack of memory and /or idealization of caregivers when describing one's attachment experiences (Main & Goldwyn, 1998). Insecure-dismissing individuals have been found to be more apt to avoid communication regarding emotions or problems with friends, are more withdrawn from partners during problem-solving, and are rated as more controlling and distancing in marital discussion tasks (Babcock et al., 2000; Berger, 2003; Paley, Cox, Burchinal, & Payne, 1999; Roisman, 2006). Insecure-dismissing individuals also are more likely to report feeling confident in their ability to regulate their negative feelings, yet are rated as exhibiting high levels of defensiveness, stonewalling, and contempt during observed romantic partner conflict (Creasey & Ladd, 2004). Behaviors such as contempt are often conveyed in an emotionally detached way that may elicit extreme negative reactions from one's partner (Jacobson et al.,

1994).

Self-reported attachment measures and relationship outcomes

Self-reported attachment styles are typically assessed by two underlying dimensions: attachment related anxiety and avoidance. Anxious attachment is characterized by the degree to which an individual is concerned about the availability of his or her partner, while avoidant attachment is characterized by the degree to which an individual minimizes emotional reliance and closeness in his or her romantic relationships (Hazan & Shaver, 1987). Self-reported attachment insecurity has been associated with romantic jealousy, heightened physiological and self reported indices of anger and reactivity during partner conflict, and greater physical and psychological partner aggression (Hazan & Shaver; Holtzworth-Munroe et al., 1997; Mikulincer, 1998).

Previous studies have just begun to examine more specific associations between certain conflict management styles and anxious-ambivalent and avoidant attachment styles. Individuals with more avoidant and anxious attachment styles reported greater conflict in opposite-sex friendships, as opposed to more securely attached teens (Saferstein, Neimeyer, & Hagans, 2005). Further, both attachment anxiety and avoidance have been associated with greater conflict escalation with friends and partners, but only attachment avoidance was also associated with greater *withdrawal* in conflict in a sample of college students (Creasey, Kershaw, & Boston, 1999). Another investigation found that more anxiously attached individuals were significantly more likely to report greater anger and hostility during videotaped partner conflict than individuals with more avoidant attachments (Simpson, Rholes, & Phillips, 1996). When anxiously attached individuals are faced with relationship turmoil, they may view the conflict as threatening to an already tenuous self-concept, and act out in an effort to maintain the relationship (Bookwala & Zdaniuk, 1998). However, Bookwala and Zdaniuk found that individuals in aggressive relationships scored higher on both anxious *and* avoidant attachment styles than those in non-aggressive relationships. Similarly, Cummings-Robbeau, Lopez, and Rice (2009) found that both self-reported anxiety and avoidance predicted interpersonal aggressiveness in a recent investigation of college students.

While the extant literature has begun to establish a link between insecure attachment and negative conflict negotiation tactics, less is known about the relationship risk factors that have been more specifically

associated with attachment avoidance, or how the *interaction* between different romantic attachment styles may be associated with particular relationship dynamics. One investigation found that more avoidant men paired up with anxiously attached women at disproportionate rates (Kirkpatrick & Davis, 1994). Yet, this may be a particularly problematic pairing, given avoidant individuals' expectations that romantic partners would tend to overemphasize the importance of qualities such as intimacy and trust, as well as overly rely on their partner (Belsky & Cassidy, 1994). While this study determined that this particular pairing predicted reports of more negative relationship quality, these relationships were also surprisingly *stable* across time (Kirkpatrick & Davis, 1994). Individuals with more avoidant attachments are more likely to withhold affection and communicate less openly than non-avoidant individuals (Collins, Cooper, Albino, & Allard, 2002). Avoidant individuals also show more anger during conflict tasks (Rholes, Simpson, & Orina, 1999) report less satisfying relationships, and are more likely to seek out emotionally negative partners than secure individuals (Collins et al., 2002). Taken together, these findings suggest the importance of recognizing the dyadic nature of romantic relationships, and possible interactions among attachment styles held by each partner (Allen & Manning, 2007).

The current study investigated the role of insecure attachment in specific conflict strategies, notably physical and psychological partner aggression and victimization. Although physical aggression has garnered more research attention, experiencing psychological aggression has been associated with psychological maladjustment and heightened internalizing symptoms and health problems, even after controlling for physical aggression victimization (Follingstad, Rutledge, Berg, & Hause, 1990; Taft et al., 2006). Further, precursors of aggression perpetration *and* victimization are rarely investigated, despite the fact that they are often highly correlated in dating relationships (Gray & Foshee, 1997; Magdol et al., 1997). Distinguishing between perpetration and victimization is challenging in part because many of the studies to date have mainly focused on male perpetrators of partner violence in predominantly adult, clinical, or highly violent samples (Babcock et al., 2000; Dutton et al., 1994; Holtzworth-Munroe et al., 1997; Kesner, Julian, & McKenry, 1997). The near exclusive focus on males as the primary (or sole) aggressors in intimate relationships is problematic as it ignores the intensely dyadic nature of romantic relationships. In fact, research has demonstrated that women's rates of violence are comparable to those of men (Archer, 2000; Bookwala & Zdaniuk, 1998; Roberts & Noller,

1998), although violent perpetration should be considered a different entity for men (given their greater potential to do major physical damage) than for women (Capaldi & Gorman-Smith, 2003).

The current study employed a longitudinal, multi-reporter, multi-method design in order to investigate the associations between attachment insecurity and partner aggression among a socio-economically and ethnically diverse community sample of adolescents and their partners. Specifically, the current study investigated whether preoccupied and dismissing overall attachment states of mind as assessed via the Adult Attachment Interview serve as risk factors for future perpetration of or victimization by physical or psychological aggression four years later. Further, the study examined whether self-reported anxious and avoidant romantic attachment styles are similarly associated with physical and psychological aggression in romantic relationships.

Method

Participants

This report was drawn from a larger longitudinal investigation of adolescent psychosocial functioning. The full larger study included 184 seventh- and eighth-graders assessed annually for the past 10 years. From this larger sample, this study focused upon 93 adolescents who had romantic partners, (M age at Time 1=14.28 SD=0.78; 42% males and 58% females, M age at Time 2=18.25, SD=1.25) along with those romantic partners (M age at Time 2=19.07, SD=3.08). The sample was racially/ ethnically and socioeconomically diverse: Of the participants, 53% identified themselves as Caucasian, 33% as African American, and 14% as being from other or mixed ethnic groups. Adolescents' parents reported a median family income in the \$40,000 to \$59,999 range (15% of the sample reported annual family income less than \$20,000, and 32% reported annual family income greater than \$60,000).

At Time 1 (T1), when target adolescents were an average of 14.28 years old (SD=0.78), attachment interview data from was obtained from all target adolescents. At Time 2 (T2), when target adolescents were an average of 18.25 years of age (SD=1.25), data were obtained from all adolescents and their romantic partners. Romantic partners averaged 19.07 years in age (SD=3.08), and the average length of their relationships with the

target adolescents was 18.00 months ($SD = 16.4$). This sub sample was selected for inclusion in the current study based on involvement in a romantic relationship of three-month duration or longer at the time of data collection.

Adolescents were recruited from the seventh and eighth grades at a public middle school drawing from suburban and urban populations in the southeastern United States. An initial mailing to parents of students in the relevant grades in the school gave them the opportunity to opt out of any further contact with the study. Only 2% of parents opted out of such contact. Of all families subsequently contacted by phone, 63% agreed to participate and had an adolescent who was able to come in with both a parent and a close friend. This sample appeared generally comparable to the overall population of the school in terms of racial/ethnic composition (37% non-White in sample vs. approximately 40% non-White in school) and socioeconomic status (mean household income = \$44,900 in sample vs. \$48,000 for community at large). The adolescents provided informed assent, and their parents provided informed consent before each interview session. The same assent/consent procedures were used for collateral peers and their parents. Interviews took place in private offices within a university academic building. Adolescents and partners were paid for their participation.

Procedure

In the initial introduction to the study and throughout both sessions, confidentiality was assured to all participants, informed consent/assent was obtained from parents and teens, and adolescents were told that their parents would not be informed of any of the answers they provided. Participants' data were protected by a Confidentiality Certificate issued by the U.S. Department of Health and Human Services, which further protects information from subpoena by federal, state, and local courts. If necessary, transportation and child care were provided to participants.

Adolescents were asked to visit our laboratory and participate in videotaped observations with their partners. The adolescents and their romantic partners also filled out behavioral measures themselves and their partner across several domains. Formal attrition analyses indicated that the current sample of 93 adolescents did not differ from the larger sample of 184 adolescents on any of the following demographic characteristics: gender, age, total household income, or ethnic identity.

To best address any potential biases due to attrition and missing data in longitudinal analyses, full information maximum likelihood (FIML) methods were utilized, with analyses including all variables that were linked to future missing data (i.e., where data were not missing completely at random). Because these procedures have been found to yield less biased estimates than approaches (e.g., simple regression) that use listwise deletion of cases with missing data, the subsample of 93 was utilized for these analyses. This analytic technique does not impute or create any new data nor does it artificially inflate significance levels. Rather it simply takes into account distributional characteristics of data in the full sample so as to provide the least biased estimates of parameters obtained when some data are missing so as to produce results that are least likely to be biased by missing data.

Measures

Adult Attachment Interview (AAI) and Q-set (George, Kaplan, & Main, 1996; Q-set, Kobak, Cole, Ferenz-Gillies, Fleming, & Gamble, 1993). This structured interview probed individuals' descriptions of their childhood relationships with parents in both global descriptive terms and with requests for supporting episodic memories. For example, participants were asked to list five words describing their early childhood relationships with each parent and then to describe specific episodes that expanded upon those words. Other questions focused on specific recounts of emotional distress, separation, loss, trauma, rejection, and descriptions of the current state of their relationships with their parents. The interview consisted of 18 questions and lasted 1 hour on average. Slight adaptations to the adult version were made in order to make the questions more appropriate and comprehensible for adolescents (Ward & Carlson, 1995). Interviews were audiotaped and transcribed for coding.

The AAI Q-Set (Kobak et al., 1993) was designed to closely parallel the Adult Attachment Interview Classification System (Main & Goldwyn, 1998; Main et al., 2008) but to additionally derive continuous measures of qualities of attachment organization. Each rater read a transcript and provided a Q-sort description by assigning 100 items into nine categories ranging from most to least characteristic of the interview, using a forced distribution. All interviews were blindly rated by at least two coders with extensive training in both the Q-sort and the Main Adult Attachment Interview Classification System.

These Q-sorts were then compared with dimensional prototype sorts for three attachment states of mind. The correlation of the 100 items of an individual's Q-sort with each dimension (ranging from .71 to 1.00) was then taken as the participant's scale score for that dimension. The attachment dimensions used for the purposes of the current study include Insecure-Dismissing and Insecure-Preoccupied states of mind. *Insecure-dismissing states of mind* reflect the inability or unwillingness to recount attachment experiences, paucity of emotional content surrounding discourse, idealization of attachment figures that contradicts specific, reported experiences, and lack of evidence of valuing attachment. *Insecure-preoccupied states of mind* reflect rambling, extensive but unfocused discourse about attachment experiences, and/or angry preoccupation with attachment figures. Each transcript was rated by two coders, and the Spearman-Brown reliability coefficients for the dimensions used in the current study were .89 for dismissing attachment states of mind, and .82 for preoccupied attachment states of mind.

These aforementioned continuous dimensions had been previously validated (Kobak et al., 1993), and using them, Kobak and colleagues report being able to accurately capture classifications from the AAI classification system. Therefore, the present study utilized continuous measures of attachment organization, such that each individual received a score on insecure-dismissing and insecure-preoccupied scales. The data derived from the Q-set system

Experiences in Close Relationships. Both teens and romantic partners reported on their emotional and behavioral relational styles in their current romantic relationship (Brennan, Clark, & Shaver, 1998). Teen and Romantic Partner self report of the Anxious Attachment and Avoidant Attachment subscales were used for the purposes of the current study. Summary scores of the 18 items comprising each scale were used. Each item is rated on a seven-point Likert scale with responses ranging from one (*Strongly Disagree*) to seven (*Strongly Agree*). The anxiety and avoidance subscales demonstrated high internal consistency ($\alpha=.88, .91$, respectively).

Conflict in Relationships. Both teens and romantic partners reported on the frequency of physically aggressive and blaming behaviors that their partner engages in during conflict. Total scores for each construct were obtained from the 27-item physical aggression scale (labeled the teen aggression/blame subscale) of the Conflict in Relationships Scale (CIR) (Wolfe, Reitzel-Jaffe, Gough, & Wekerle, 1994). Each item was rated on

a 4-point Likert scale with responses ranging from one (*never happened*) to four (*happened 6+ times*). The current study used a 70 item version that our laboratory adapted from the original 80-item version. The partner and teen report of the physical aggression subscales demonstrated high internal consistency ($\alpha = .91, .90$, respectively).

Psychological Maltreatment Experience Scale. Target adolescents and their romantic partners each reported on the frequency of their partner's use of psychologically aggressive tactics. The 16-item psychological aggression subscale of the Psychological Maltreatment Experience Scale (PMES) was used (Petretic-Jackson, Betz, & Pitman, 1995). Each item was rated on a four-point scale, with responses ranging from zero (*never*) to three (*very often*). Partner report of teen aggression and teen report of partner aggression subscales demonstrated high internal consistency ($\alpha = .91$).

Results

Preliminary Analyses

For descriptive purposes, Table 1 presents the means, standard deviations, and simple univariate correlations among the primary variables of interest and demographic variables in the study. Several main effects were found for gender, and one main effect was found for non-White status. As can be seen in Table 1, non-White status was significantly correlated with teen physical aggression, indicating that adolescents who exhibited higher levels of physical partner aggression were more likely to come from non-White families. Further, gender was significantly correlated with dismissal of attachment and romantic partner verbal aggression, indicating that females were less likely to possess dismissing attachment states of mind, and less likely to have partners that exhibited verbal aggression, than males. Because non-White ethnic status and adolescent gender were related to attachment security and aggressive behavior, these demographic variables were included in every hierarchical regression analyses presented below. We also examined possible moderating effects of these demographic factors on each relationship delineated in the primary analyses below.

Primary Longitudinal Analyses

Insecure attachment states of mind as predictors of romantic relationship qualities over time. First, we examined whether a specific insecure attachment state of mind (i.e. preoccupied vs. dismissing) was associated

with a specific insecure romantic attachment style four years later.

Teen romantic attachment avoidance was regressed onto dismissing attachment, after first accounting for the effects of adolescent gender, and ethnicity. These results indicated a significant positive relationship between dismissing attachment and avoidant attachment ($\beta=.23, p<.05$). No significant associations were found between dismissing attachment and teen attachment anxiety, preoccupied attachment and teen attachment anxiety, nor preoccupied attachment and teen attachment avoidance.

Secondly, in order to examine whether a specific AAI insecure attachment state of mind (i.e., preoccupied vs. dismissing) uniquely predicted variance that could not be accounted for by the other specific insecure state of mind, we included the markers of both AAI strategies in all primary analyses.

This study first examined whether holding a more preoccupied state of mind at age 14 was predictive of subsequent partner aggression perpetration or victimization at age 18. Teen aggression was regressed onto attachment preoccupation, after first accounting for demographic effects and dismissing attachment. These results indicated a significant positive relationship between preoccupied attachment and verbal aggression ($\beta=.41, p<.01$), such that holding a more preoccupied state of mind was associated with higher levels of verbally aggressive behavior toward one's partner four years later. No significant associations were found between preoccupied attachment and physical aggression perpetration, nor preoccupied attachment and verbal or physical aggression victimization.

Further, we examined whether holding a more dismissing state of mind at age 14 was predictive of subsequent partner aggression perpetration or victimization at age 18. After accounting for the effects of the demographic variables, and preoccupied attachment, a significant positive relationship between dismissal of attachment and victimization was found ($\beta=.30, p<.05$), such that possessing a more dismissing state of mind was associated with higher levels of verbal aggression from one's partner four years later. No significant associations were found between dismissing attachment and victimization via physical aggression or between dismissing attachment and verbal or physical aggression perpetration.

Primary Concurrent Analyses

Self-reported romantic attachment styles and outcomes of aggression. We also examined whether

romantic partner's attachment anxiety in their relationship was predictive of partner aggression perpetration or victimization. As before, we used a hierarchical regression analysis, first controlling for demographic variables, and then examined the contribution of partner avoidant attachment and anxious attachment. These results, as depicted in Table 2, indicated a significant positive relationship between partner reported attachment anxiety and teen report of victimization by partner via verbal aggression ($\beta=.28, p<.01$) and teen report of victimization by partner via physical aggression ($\beta=.27, p<.01$), beyond that of partner avoidant attachment style. This finding suggests that teens whose romantic partners were more anxiously attached in romantic relationships were more likely to be victimized by verbal and physical aggression by those partners. In addition, gender moderated the relationship between partner anxious attachment and teen report of partner verbal aggression, such that there was a stronger association between partner anxious attachment and teen report of their partner's verbally aggressive strategies, for male partners as opposed to female partners.

Further, we examined whether teen's romantic attachment anxiety was predictive of subsequent teen perpetration of or victimization by aggression. These results indicated a significant positive relationship between teen attachment anxiety and partner report of teen physical aggression perpetration ($\beta=.25, p<.05$), such that higher levels of attachment anxiety were associated with perpetrating more physical aggression. No significant relations were found between teen romantic anxiety and verbal aggression perpetration or victimization.

In addition, we examined whether teen's avoidant romantic attachment was predictive of victimization of verbal and/or physical aggression. No significant relations were found.

Post Hoc Analyses

Conjoint and unique predictions from two attachment traditions. After analyses for the primary hypotheses were tested, we then considered measures from each attachment tradition together in a single regression model so as to examine their conjoint and unique predictive value. When partner romantic attachment styles and AAI attachment states of mind were included in the same model, both partner attachment anxiety, from the Experiences in Close Relationships measure, and dismissing attachment states of mind from the AAI each contributed unique variance to the prediction of the target teen's victimization by partner *verbal*

aggression. Further, partner attachment anxiety remained significant in predicting target adolescent's victimization by partner's *physical* aggression, even after accounting for other measures from both traditions. Full results are presented in Table 3.

When teen romantic attachment styles and AAI attachment states of mind were included in the same model to consider the contribution of each attachment tradition to the target adolescent's perpetration of physical aggression, only teen attachment anxiety remained significant in predicting teen physical aggression perpetration, even after considering the other indices of attachment ($\beta=.23, p<.05$). Full results are presented in Table 4.

Interactions of intraindividual and interindividual attachment insecurity for outcomes of aggression.

We examined the predictions of potential interactions across attachment traditions for outcomes of aggression (e.g., the interaction of partner attachment anxiety by teen preoccupied state of mind, the interaction of partner attachment avoidance by teen dismissing state of mind). All such interactions were non-significant.

Further, we examined predictions of interactions between partner and teen self-reported attachment styles for outcomes of aggression. Romantic partner attachment anxiety was related to teen physical aggression and manipulative blame toward the partner via the moderating role of teen attachment avoidance. Physical aggression was regressed onto partner attachment anxiety, teen attachment avoidance, and the interaction between the two, after first accounting for the effects of adolescent gender and ethnicity. These results, as depicted in Figure 1, indicated a significant main effect of partner attachment anxiety ($\beta=.25, p<.05$), and a significant interaction between partner attachment anxiety and teen attachment avoidance ($\beta= -.25, p<.05$). This finding indicates that teens were most likely to be physically aggressive when they were low in avoidance and their partners were high in romantic attachment anxiety. All other interactions between teen and romantic partner attachment styles in predicting partner aggression were non-significant. Lastly, we examined interactions between teen's own attachment avoidance and teen's own attachment anxiety in predicting partner reports of aggression, in order to avoid confounds associated with single-reporter, concurrent relationships. No significant interactions were found.

Finally, on a post-hoc basis, we examined possible links between age difference between partners and

aggression. No relations were observed. Further, when we controlled for age difference between partners, all previously reported associations between attachment insecurity and aggression remained significant.

Discussion

This study found a number of links between adolescents' states of mind regarding attachment relationships, their current romantic attachment styles and their romantic conflict strategies. First, findings were obtained with respect to both preoccupied and dismissing states of mind with respect to attachment. A preoccupied state of mind at age 14 was found predictive of verbally aggressive behavior toward romantic partners at age 18. This finding is consistent with the notion that attachment insecurity can be characterized in part as an unsuccessful attempt to adaptively regulate one's emotions (Allen & Manning, 2007), particularly in an emotionally evocative situation, such as during conflict. Similarly, the attachment interview can be emotionally challenging for individuals, and attachment preoccupation as captured in the AAI is characterized by adolescents' undercontrolled, wandering, often angry discourse when describing their childhood experiences with their caregivers. The preoccupied state of mind is thought to activate conflicting thoughts and feelings regarding a history of unpredictable relationships and may lead to anger and hostility when distress is encountered in an intimate relationship (Simpson et al, 1996). As a result, adolescents may engage in verbally aggressive tactics, such as manipulation, name-calling, and guilt induction, due to a diminished ability to successfully regulate anger responses during conflict. One additional possibility is that preoccupied individuals may be verbally aggressive in a conscious (or unconscious) attempt to emotionally engage their partner, so as to assure themselves that their partner remains emotionally invested in the relationship.

This study also found that teens with more dismissing attachment states of mind were at increased risk for being *victimized* by verbal aggression from their romantic partners four years later. Dismissing teens may be more likely to emotionally and/or physically withdraw in order to avoid a direct discussion of a topic that may be emotionally charged and stressful, a pattern consistent with previous research (Pietromonaco et al., 2006). Although the distancing strategy that more dismissing teens may employ does not in any way make them responsible for their partner's potential aggressiveness, withdrawal may be perceived as frustrating and subsequently evoke strong emotional and behavioral responses from partners. This dyadic exchange can be

compared to the demand-withdraw patterns of negotiating conflict, which are known to intensify over time in marital relationships and lead to conflict escalation (Berns, Jacobson, & Gottman, 1999; Kobak, Duemmler, Burland, & Youngstrom, 1998).

The current investigation also examined the associations between teen and romantic partner romantic attachment styles and relationship conflict tactics. Teens who selected partners with heightened attachment anxiety had relationships in which the anxiously attached partners were more verbally and physically aggressive towards the teens. An anxiously attached individual's maladaptive anger responses in the context of intimate relationships may be indicative of an overinvestment in the relationship, and evidence that the individual is engaging in substantial protest (albeit dysfunctional protest) against the potential loss of his or her loved one (Bowlby, 1973). Since the notion that conflict may represent a potential loss of a (romantic) attachment figure may be more salient and threatening to anxiously attached individuals, such individuals may potentially act out more aggressively in an effort to maintain proximity and connection to their partner (Dutton et al., 1994). This protest that anxiously attached individuals characteristically exhibit may set the stage for global dysregulation in their relationships. The association between romantic attachment anxiety and relationship qualities are in contrast to a recent study that failed to find an association between self-reported attachment style subtypes and subsequent romantic relationship qualities (Dinero, Conger, Shaver, Widaman, & Larsen-Rife, 2008). This difference may be partially attributed to the fact that while Dinero et al. examined prospective associations between attachment styles and relationship interactions, associations investigated in the current study were cross-sectional, which precludes our ability to tease apart the direction of associations between self-reported attachment styles and relationship qualities.

Further, the current study examined concordances between assessments from the two attachment traditions. While AAI attachment states of mind reflect the ways in which individuals regulate thoughts and feelings surrounding caregiver experiences, self-reported attachment styles more closely reflect individuals' thoughts, feelings and behaviors in romantic relationships. Teen's more dismissing state of mind regarding attachment at age 14 was predictive of a more avoidant romantic attachment style at age 18. However, teen's preoccupied state of mind regarding attachment was not predictive of a specific romantic attachment style at age

18. These findings are relatively consistent with meta-analytic results, which demonstrate a trivial to small correspondence between assessment instruments from the two major attachment traditions (Roisman et al, 2007). Such results suggest that care should be taken to delineate the differences between attachment traditions in subsequent research, rather than make assumptions that attachment states of mind and romantic attachment style are synonymous. However, in consideration of the fact that Roisman et al. did find significant links between the AAI unresolved trauma/loss classification and self-reported attachment anxiety, perhaps future research that considers the full set of Main et al. classification ratings in relation to self-reported attachment styles may yield additional results.

In this vein, analyses that simultaneously examined measures from the Experience in Close Relationships questionnaire (partner report) and AAI (teen report) demonstrated that teen's attachment anxiety remained predictive of teen physical aggression after accounting for other attachment indices obtained from the teen. Similarly, partner's attachment anxiety predicted target teen's verbal and physical victimization after accounting for teen AAI strategies and partner attachment avoidance. Notably, though, one analysis did demonstrate that dismissing attachment (from the teen's AAI) was an equally strong predictor of verbal aggression victimization by a partner as was partner's own self-reported attachment anxiety. The comparatively stronger findings for self-reported attachment anxiety vs. AAI attachment states of mind should be interpreted with caution given the small sample size and accompanying power limitations of the study. These findings, if replicated, may in part reflect that the romantic attachment measure captures proximate, self-reported, relationship-specific, emotional and behavioral processes. In contrast, the AAI taps broader and more distal emotion regulatory processes. In this study, the AAI was assessed several years prior to assessment of relationship outcomes, which could also account for the comparatively weaker findings between the AAI attachment states of mind and aggression. Further, in the case of partner aggression, it should also be noted that the AAI measures were obtained from the teen, not the partner, and this method difference may also account for these findings. Together, these findings suggest not only that it is important to continue to investigate the relationship risks associated with both attachment states of mind and romantic attachment styles, but also that it is important to consider the attachment strategies of *both* parties in a relationship when trying to understand

behavior of either party within that relationship (Roberts & Noller, 1998).

Finally, an interaction was detected in which teens were most likely to be physically aggressive when they were low in avoidance and their partners were high in romantic attachment anxiety. This finding could be interpreted in several ways: first, it suggests that teens that are higher in romantic attachment avoidance may be engaging in distancing tactics that might serve as a substitute for the exhibition of more provocative, aggressive conflict tactics. Secondly, it suggests that individuals who are low in attachment avoidance may face conflicts head on, and in fact, even engage in aggressive tactics in the face of conflict with a more anxiously attached partner. It is when teen lack of avoidance and high partner anxiety occur *in combination* that teens are most likely to be aggressive, in the current study.

These findings have several limitations. First, causal relationships cannot be inferred from these results. In addition, several of the hypotheses were investigated using only cross-sectional associations. Thus we cannot determine whether teen self reported attachment styles precede, follow, or co-occur with aggressive tactics in their romantic relationships. Future research in our laboratory will be able to examine how such associations between romantic attachment styles and aggressive tactics hold up across time, as the teens enter into adulthood. However, three of our primary analyses were longitudinal, which enables us to begin to tease apart the directionality of associations. Further, we could not control for baseline levels of conflict or romantic attachment styles, because the relevant romantic relationships often did not even exist at the first time point of our study. Also, since we know that some individuals with insecure attachment organizations are prone to misreporting their own symptomatology (Berger, Jodl, Allen, Kuperminc, & McElhaney, 2005); it also seems likely that some insecure individuals in our sample may similarly misreport the level of relationship aggression in their romantic relationships. This study was also limited by its relatively small sample size, which restricts power for many analyses. Finally, although the use of a community sample maximizes the generalizability of the findings, the incidence of partner aggression was frequently not severe, thus these results should not be generalized to high risk samples.

In sum, research to date has primarily investigated how *overall attachment insecurity* poses an increased risk for perpetration of aggression in the romantic context. However, the results of the current study begin to

find associations between certain relationship patterns and specific types of insecure attachment, which may lend further support to recent findings that it is the specific *type* of attachment insecurity that may matter in certain contexts (McElhaney, Immele, Smith, & Allen, 2006). Further, these findings highlight the importance of considering the dyadic role of both teen and partner romantic attachment styles on relationship outcomes, and may help inform the development of interventions that incorporate both attachment-related processes and couple-oriented approaches (Mikulincer, Florian, Cowan, & Cowan, 2002; Wampler, Shi, Nelson, & Kimball, 2003). Gaining a better understanding of the origins of such anger responses may ultimately guide therapeutic interventions to help individuals more effectively regulate and constructively express anger during interpersonal distress, in order to reduce their risk for involvement in partner aggression.

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Table 1
Means, Standard deviations, and Correlations among Demographic, Predictor, and Outcome Variables

	Mean	SD	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
1. Non- White Status (0=No, 1=Yes)	-	-	.04	.13	.26	-.20	-.09	.15	-.02	.02	-.05	.23*	.03
2. Gender (1=M; 2=F)	-	-	-	.17	-.28**	.02	-.07	-.07	-.09	.15	-.28**	.14	-.21
3. Preoccupied Strategies	-.03	.23		-	.44***	.06	.02	.10	.00	.25*	-.13	.26*	.04
4. Dismissing States of mind	.03	.42			-	.0	.08	.26**	.09	.02	.21	.14	.21*
5. Teen Anxious Attachment	50.60	21.19				-	.11	.37***	.28**	.15	.18	.13	.27**
6. Partner Anxious Attachment	60.53	19.20					-	.17	.09	.33*	.30**	.26*	.27*
7. Teen Avoidant Attachment	36.03	15.73						-	.26*	-.05	.18	-.04	.28**
8. Partner Avoidant Attachment	39.57	16.64							-	.24*	-.07	.01	-.01
9. Teen Verbal Aggression	22.17	6.47								-	.25*	.71**	.31**
												*	
10. Partner Verbal Aggression	20.32	5.69									-	.18	.59***
11. Teen Physical Aggression	40.13	11.36										-	.28*
12. Partner Physical Aggression	36.60	9.66											-

Note. ** $p \leq .01$. * $p \leq .05$.

Table 2

Regressions of Partner Anxious Attachment on Teen Report of Teen Verbal and Physical Aggression Victimization by Partner at Age 18

	Teen Verbal Aggression				Teen Physical Aggression			
	<u>Victimization (Teen Report)</u>				<u>Victimization (Teen Report)</u>			
	β entry	β final	ΔR^2	R^2	β entry	β final	ΔR^2	R^2
Step I.								
Non-White Ethnic Identity (0=No, 1=Yes)	-.03	.01			.04	.08		
Gender (1=M; 2=F)	-.27**	-.25**			-.21*	-.18		
Summary Statistics			.07	.07			.04	.04
Step II.								
Partner Avoidant Attachment (Partner Report)	-.11	-.11			-.03	-.03		
Partner Anxious Attachment (Partner Report)	.28**	.28**			.27**	.27**		
Summary Statistics			.08*	.15*			.07	.11 ⁺

Note. ** $p \leq .01$. * $p \leq .05$.

Table 3
Regressions of Partner Attachment Styles and Teen AAI Attachment States of Mind on Teen Verbal and Physical Victimization

	Teen Verbal Aggression				Teen Physical Aggression			
	<u>Victimization (Teen Report)</u>				<u>Victimization (Teen Report)</u>			
	β entry	β final	ΔR^2	R^2	β entry	β final	ΔR^2	R^2
Step I.								
Non-White Ethnic Identity (0=No, 1=Yes)	-.03	-.03			.04	.04		
Gender (1=M; 2=F)	-.27**	-.13			-.21*	-.13		
Summary Statistics			.07	.07			.04	.04
Step II.								
Partner Avoidant Attachment (Partner Report)	-.10	-.11			-.03	-.04		
Partner Anxious Attachment (Partner Report)	.29**	.27**			.27**	.26**		
Summary Statistics			.09*	.16*			.07	.11 ⁺
Step III.								
Teen Dismissing Attachment (Interview)	.26*	.26*			.17	.17		
Teen Preoccupied Attachment (Interview)	-.24 ⁺	-.24 ⁺			-.01	-.01		
Summary Statistics			.05 ⁺	.21**			.03	.14 ⁺

Note. ** $p \leq .01$. * $p \leq .05$. ⁺ $p < .10$.

Table 4

Regressions of Teen Romantic Attachment Styles and Teen AAI Attachment States of Mind on Partner Report of Teen Physical Aggression Perpetration at Age 18

	β entry	β final	ΔR^2	R^2
Step I.				
Non-White Ethnic Identity (0=No; 1=Yes)	.23*	.26*		
Gender (1=M; 2=F)	.14	.07		
Summary Statistics			.08 ⁺	.08 ⁺
Step II.				
Teen Avoidant Attachment (Teen Report)	-.14	-.17		
Teen Anxious Attachment (Teen Report)	.25*	.23*		
Summary Statistics			.04	.12 ⁺
Step III.				
Teen Dismissing Attachment (Interview)	-.02	-.02		
Teen Preoccupied Attachment (Interview)	.25 ⁺	.25 ⁺		
Summary Statistics			.05	.17*

Note. ** $p < .01$. * $p \leq .05$. ⁺ $p < .10$.

Figure Captions

Figure 1. Moderating effect of teen avoidant attachment on partner anxious attachment in predicting teen physical aggression.

