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Interactions Between Rejection Sensitivity and Supportive Relationships in the Prediction of Adolescents' Internalizing Difficulties

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Abstract

Rejection sensitivity, the tendency to anxiously or angrily expect rejection, is associated with internalizing difficulties during childhood and adolescence. The primary goal of the present study was to examine whether supportive parent–child relationships and friendships moderate associations that link angry and anxious rejection sensitivity to depression and social anxiety during middle adolescence in an ethnically diverse sample of 277 youth (M age = 14.30 years; 46.93% male). Analyses revealed that angry rejection sensitivity was related to depressive symptoms, but only for adolescents reporting low support from parents and friends. Friend support moderated the association between (1) angry rejection sensitivity and social anxiety, and (2) anxious rejection sensitivity and depressive symptoms. For adolescents reporting low support from friends, support from parents was positively related to social anxiety. Findings highlight the importance of considering relationships in studies of rejection sensitivity and adjustment during adolescence.

Keywords

Rejection sensitivity; Parent–child relationships; Friendships; Depression; Social anxiety

Introduction

A basic tenet of social-developmental research is that supportive relationships with parents and friends positively influence psychological well-being during childhood and adolescence (e.g., Laursen and Collins 2009; Rubin et al. 2006). For example, children and adolescents whose parents are warm and supportive are less likely to develop depression and anxiety than those without such relationships (e.g., Adams and Laursen 2007; McLeod et al. 2007). Researchers have also demonstrated that having high quality friendships is negatively associated with anxiety and depression during adolescence (e.g., La Greca and Harrison 2005). Given that depression and social anxiety are two of the most prevalent psychiatric disorders in adolescence (Kessler et al. 2005), and that they increase in intensity and duration during this developmental period (e.g., Lewinsohn et al. 1994; Wittchen et al. 1999), a greater understanding of when and how relationships with parents and friends protect adolescents from developing these difficulties is of significance.

Recent theory and research on *rejection sensitivity* (RS), a social-cognitive bias believed to reflect dispositional tendencies to expect rejection from others, has focused on the psychosocial maladjustment correlates and consequences of being overly sensitive to cues of rejection (e.g., Downey et al. 1998b). Evidence indicates that RS is positively associated with such indicators of adjustment difficulty as anxiety and depression during adolescence (e.g., Harper et al. 2006; London et al. 2007; Sandstrom et al. 2003). It is not well known, however, whether warm and supportive relationships with parents and friends might mitigate the risk for anxiety and depression associated with RS, a research gap that is surprising given speculation that positive interpersonal relationships may alter expectations of rejection (Downey and Feldman 1996). Thus, the current study builds on the extant research by examining the linkages between RS, relationships with parents and friends, and internalizing symptoms during adolescence. Of particular interest was whether the quality of relationships with mothers, fathers, and friends would moderate associations between RS and depressive symptoms and between RS and social anxiety.

Rejection Sensitivity and Adjustment Difficulties

Research about rejection sensitivity draws from both attachment and social information processing theories. Rejection sensitivity is conceptualized as an individual's tendency to expect rejection from others and to overreact to possible rejection experiences (Downey et al. 1998b). The empirically-supported RS model states that experiences with rejection, from parents and/or peers, may sensitize children and adolescents to readily expect and perceive rejection in situations wherein rejection is possible (Feldman and Downey 1994; London et al. 2007).

Based on interviews with older children and young adolescents, Downey et al. 1998b) distinguished between two affective responses that may accompany expectations of rejection: anxiety and anger. Some individuals may be more prone to react to rejection with anger whereas others may be more likely to respond with anxiety. Both types of affective-expectations have been hypothesized to give rise to general social dissatisfaction, reflecting a desire "for more social provisions than one feels one has in any particular social situation with a bias toward underestimating the social provisions provided in that situation" (London et al. 2007, p. 486). However, Downey and colleagues have suggested that the correlates and consequences of anxious and angry RS may differ, with anxious RS, or how anxiously individuals expect rejection in interpersonal situations, being more strongly associated with internalizing difficulties and angry RS, or how angrily individuals expect rejection, being more strongly associated with externalizing problems (Downey et al. 1998b; London et al. 2007). In other words, anxious RS may lead to "flight" responses in interpersonal situations

(e.g., social anxiety, withdrawal, and depression) whereas angry RS is more likely to lead to “fight” responses (e.g., disputatiousness, aggression; London et al. 2007).

The evidence is consistent with these hypotheses. For instance, anxious RS has been linked to depression during childhood and early adolescence (Harper et al. 2006), and anxious RS has been associated with increases over time in social anxiety and social withdrawal, even when controlling for angry RS (London et al. 2007). Angry RS has been found to be negatively related to perceived social and behavioral competence and positively associated with aggression and conflicts with school personnel and peers (Downey et al. 1998b). Finally, angry RS has predicted *decreases* in social anxiety over time, after controlling for anxious expectations (London et al. 2007). Taken together, the extant research suggests that angry and anxious RS may uniquely relate to forms of social adjustment in children and adolescents.

Close Relationships and Adjustment

According to attachment theory (Bowlby 1969), the relationship between the child and parent derives from a biologically-rooted behavioral system that is marked by the infant’s natural proximity-seeking to caregivers for safety, security, and support. Caregivers serve as both *secure bases* from which infants and children can explore their surrounding world and *safe havens* in which they return to the attachment figure for comfort and safety in the face of fear or threat (Ainsworth et al. 1978). If caregivers are sensitive and responsive to their child’s needs, the child is more likely to develop an internal working model of “felt security” and the social and cognitive resources to explore their environment, see themselves as worthy of love and support, and form positive social relationships.

Many researchers have found that positive, warm, and supportive relationships with parents predict healthy social-emotional adjustment during childhood and adolescence (for a recent review, see Laursen and Collins 2009). For example, adolescents who report their parents as being sensitive and supportive are socially competent, have higher quality friendships, and feel better about themselves (e.g., Booth-LaForce et al. 2006; Laible et al. 2004; Rubin et al. 2004). In contrast, perceptions of relationships with parents as unsupportive and insensitive have been associated with anxiety and depression during childhood and adolescence (e.g., Granot and Mayseless 2001; Nolan et al. 2003). It has been suggested that when parents are cold, hostile, and unsupportive, child and adolescent feelings of security and views of self may suffer which, in turn, may increase vulnerability to internalizing difficulties.

Friends also play a significant role in children’s and adolescents’ lives, providing companionship, help and guidance, validation and emotional support (Bukowski et al. 2009). High quality friendships are typified by warmth, intimacy, and aid, whereas low quality friendships have been characterized as lacking in these provisions. Both concurrently and prospectively, high quality friendships have been associated with positive adjustment indices such as greater school involvement, higher self-esteem, and less loneliness and anxiety (for a recent review, see Bukowski et al. 2009). Thus, high-quality friendships during adolescence offer much needed support and security and are an important context for positive development.

Not only do high quality parent–child relationships and friendships directly impact adjustment, having warm and supportive relationships may be particularly helpful for those children and adolescents at risk for internalizing symptoms (e.g., Bowker and Rubin 2009). For instance, it has been found that maternal warmth moderates the association between peer rejection and psychosocial adjustment difficulties during early childhood (e.g., Patterson et al. 1989). Additionally, friendships have been found to protect isolated and excluded children from subsequent increases in internalizing symptoms (Bukowski et al., in press;

Laursen et al. 2007). There is also some evidence that friendships compensate for parent-child relationships lacking in warmth, protecting adolescents, especially girls, from developing depressive symptoms (Rubin et al. 2004).

Hypotheses

First, given the limited research on the different forms of rejection-sensitive biases, one goal of the present investigation was to examine both anxious and angry RS as independent predictors of internalizing difficulties during adolescence. Previous studies focused on the associations between anxious and angry RS and internalizing difficulties during late childhood (e.g., Sandstrom et al. 2003) and early adolescence (e.g., 6th–8th graders; Downey et al. 1998b; London et al. 2007). The present investigation focused on mid-adolescence (*M*age of our participants = 14 years), after the transition to high school, a period of high stress when worries about acceptance may be heightened. Although both forms of RS are likely to be concurrently related to internalizing problems, drawing on past research (e.g., Downey et al. 1998b; London et al. 2007), we hypothesized that *anxious* RS would emerge as the unique predictor of social anxiety and depressive symptoms, when angry RS was controlled. Although, angry expectations of rejection may also be internalized (e.g., Harter and Jackson 1993), we hypothesized that the associations of social anxiety and depressive symptoms with *angry* RS would be smaller in magnitude than associations with anxious RS and would not be independently related to internalizing issues after controlling for anxious RS.

Given that both parents and friends “matter” in the lives of adolescents, the central goal of the study was to investigate if support from parents and friends would moderate the association between RS and internalizing symptoms. Previous research has linked prior negative family and peer experiences to later RS (e.g., Feldman and Downey 1994; London et al. 2007) and RS with internalizing problems (e.g., Harper et al. 2006; London et al. 2007). However, researchers have yet to examine how concurrent perceptions of relationships with both parents and peers may actually moderate associations between RS and internalizing problems. As noted previously, Downey and Feldman (1996) suggested that supportive relationships may alter expectations about rejection. If Downey and Feldman are correct, we may also expect supportive relationships with parents or friends to protect rejection-sensitive adolescents from developing depression or social anxiety. Rejection-sensitive adolescents are preoccupied with feelings of rejection, but those rejection-sensitive adolescents who feel supported and loved by parents or friends may show better psychological well-being than their counterparts who do not perceive their relationships to be supportive. However, given that rejection-sensitive cognitive biases may develop from numerous and lasting experiences with rejection, we reasoned that the most powerful moderator of the association between RS and internalizing difficulties may be the interaction between parent and friend support. Therefore, we also tested three way interactions between RS, parent support, and friendship support.

In addition to examining how associations between RS and adolescent adjustment were moderated by relationships with parents and friends, we investigated whether these two relationships might interact in the prediction of social anxiety and depressive symptoms. Since parent and friend relationships may differentially predict adjustment depending on the developmental period, with friends becoming relatively more important in adolescence, and few studies have examined how friendships may affect the associations between mother- and father-child relationships and adjustment (for an exception, see Rubin et al. 2004), a final goal of the present study was to investigate whether a supportive relationship with a friend would protect adolescents who perceive their relationships with parents to be relatively unsupportive from feeling depressed and socially anxious.

Method

Participants

Participants were drawn from a larger longitudinal study focused on school transitions and close relationships. The study sample included 277 adolescents (130 boys; M age = 14.30 years, $SD = .51$) who completed measures that were mailed to their homes or who completed questionnaires over the internet in the spring of 9th grade, the first year of high school. The sample was racially/ethnically diverse with approximately 53.9% of the adolescents self-identifying as Caucasian, 15.9% as African-American, 13.3% as Asian, 11.4% as Latino/a, and 5.2% as bi- or multi-racial.

Procedure

All participants were first contacted by telephone and if both parents and adolescents expressed interest, parental consent and adolescent assent forms were mailed to the home with pre-addressed and stamped return envelopes. Adolescents were given the option of completing questionnaires (see below) on paper or online. Depending on the cohort and participant preference, packets of questionnaires were mailed home (approximately 87% of the sample) or a link to a secure website was sent via email (13% of the sample).

Measures

Social Support—The Network of Relationships Inventory (*NR*I; Furman and Buhrmester 1985) was used in this study to assess adolescents' perceptions of support from mother and father as well as their same-sex best-friend. Participants rated how each of 33 items described their relationships with mothers, fathers, and friends on a scale from 1 (none/not at all) to 5 (very much/almost always). Items comprise 11 conceptually distinct subscales that load onto three factors (Burk and Laursen 2005; Furman 1996): (a) social support (affection, admiration, companionship, instrumental help, intimacy, nurturance, reliable alliance, and satisfaction), (b) negativity (antagonism and conflict), and (c) relative power. Of interest in the present study was the *social support* subscale for mother ($\alpha = .94$), father ($\alpha = .96$), and best friend ($\alpha = .94$).

Rejection Sensitivity—A modified version of the Children's Rejection Sensitivity Questionnaire (*CRSQ*; Downey et al. 1998b) was utilized to assess adolescents' RS. The original measure had 12 vignettes, with 6 describing possible rejection by peers and 6 describing possible rejection by a teacher. For the current study, vignettes involving rejection by teacher were not included. Participants read six separate vignettes describing potential rejection situations involving peers (e.g., "...you hear some kids whispering... You wonder if they are talking about YOU"). Participants then rated how nervous they would feel (e.g., How NERVOUS would you feel, RIGHT THEN, about whether or not those kids were badmouthing you?) followed by how mad they would feel (e.g., How MAD would you feel, RIGHT THEN, about whether or not those kids were badmouthing you?) for each situation on a scale from 1 (not nervous/mad) to 6 (very, very nervous/mad). Participants also rated how much they expected to be rejected (e.g., Do you think they were saying bad things about you?) on a scale from 1 (no) to 6 (yes). The Anxious RS score ($\alpha = .77$) was created by multiplying the rating for nervousness by the rejection expectation for each vignette and then summing the products for the six vignettes (Downey et al. 1998b). A similar procedure was used to calculate Angry RS scores ($\alpha = .68$) from the anger ratings. Scores on each subscale could range from 6 (low) to 216 (high). Adequate test-retest reliabilities have been demonstrated for the RS subscales (e.g., Downey et al. 1998b).

Social Anxiety—Participants completed the Multidimensional Anxiety Scale for Children (*MASC*; March et al. 1999), composed of 39 items, rated on a scale from 0 (never true of

me) to 3 (often true of me). Items assess different types of anxiety symptoms, such as tenseness/restlessness, somatic and physical symptoms, and social anxiety. Of interest in the present study was the social anxiety subscale ($\alpha = .87$).

Depressive Symptoms—Adolescents' depressive symptoms were assessed with a modified version of the Children's Depression Inventory (*CDI*; Kovacs, 1992, Unpublished manuscript), in which the suicidality item had been removed. The measure includes 27 groups of sentences, and within each group, sentences correspond to a level of symptomology, ranging from 0 (symptom not present) to 2 (high level of symptom). Participants were instructed to pick a sentence from a group of sentences that best described them during the past 2 weeks. Items assess five categories of depressive symptoms: (1) negative mood, (2) interpersonal problems, (3) ineffectiveness, (4) anhedonia, and (5) negative self-esteem. Scores across all items were summed and used in the present study as a measure of overall depressive symptoms ($\alpha = .90$).

Results

Preliminary Analyses

Descriptive statistics and correlations among study variables are shown in Table 1. Social support from both mother and father were highly related. Social support from parents was positively correlated with social support from friends and was negatively correlated with both forms of RS and depressive symptoms, but not with social anxiety. Friend social support was negatively related to anxious RS, depressive symptoms, and social anxiety, but was not related to angry RS. Both forms of RS were positively associated with indices of depressive symptoms and social anxiety. The strong correlations between the two RS subscales are comparable to those associations documented in other published studies on anxious and angry RS (e.g., London et al. 2007). The association between anxiety and depressive symptoms was moderate, supporting suggestions that anxiety and depression represent related but distinct types of emotional difficulties during adolescence. Preliminary sex difference comparisons (*t*-tests) indicated that girls ($M = 4.11$, $SD = .57$) rated their friendships as more supportive than boys ($M = 3.76$, $SD = .60$; $t = 4.99$, $p < .001$; $d = .60$). Boys and girls did not differ significantly on any of the other study variables.

Data Analytic Plan

To test the unique linkages between anxious and angry RS with depressive symptoms and social anxiety and to examine whether parent and friend support moderate the associations between angry and anxious RS and internalizing difficulties, a series of hierarchical regression analyses was conducted. Models were conducted to separately examine the unique contribution of each form of RS to social anxiety and depression as well as separately examine support from mothers and fathers. In each analysis, we simultaneously controlled for sex and the alternative form of RS, because anxious and angry expectations were highly correlated. Preliminary analyses included sex as a moderator of RS, social support, and friendship quality, including all two-way, three-way, and four-way interactions. None of the interactions with sex were statistically significant.

In step one of the regression models, adolescent sex (1 = boys, 0 = girls) and the alternative form of RS were entered. In step two, the focal form of RS, social support from the focal parent, and friend social support were entered. By controlling for the alternative form of RS in step one and entering the focal form in step two, we were also able to test the hypothesis that anxious RS would be associated with depression and social anxiety, beyond the effects of angry RS and that angry RS would not be associated with depression and anxiety after controlling for anxious RS. In step three, the two-way interactions between the focal form of

RS, social support from the focal parent, and friend social support were entered. In step four, the three-way interaction was entered. The first set of analyses focused on anxious RS and the second set of analyses focused on angry RS. All variables were centered prior to the formation of interactions. Only significant main and interaction effects are reported below; all other effects were non-significant. All significant interactions were probed following procedures outlined by Aiken and West (1991).

Parental Social Support and Anxious Expectations of Rejection

Social Support from Mother—As seen in Table 2, when predicting depressive symptoms, the interaction between friend support and anxious RS was significant as well as the main effects for mother support and anxious RS. Values for friend support were chosen to correspond to one SD above the mean (high) and one SD below the mean (low) and simple slopes were examined. For adolescents whose friendships were *low* in support, anxious RS was related to depressive symptoms ($\beta = .33, p = .001$), but for adolescents with high friend support it was not ($\beta = .11, p = .42$).

In predicting social anxiety, the interaction between mother support and friend support was significant, as were the main effects of friend social support and anxious RS (Table 2). To probe the interaction, values for friend support were chosen to correspond to one SD above the mean (high) and one SD below the mean (low). Results from simple slope analyses indicated that the only significant association between mother support and social anxiety was for adolescents with *low* support from friends; the simple slope for this group was *positive* ($\beta = .16, p = .05$). The relation between mother support and social anxiety was not significant for youth with highly supportive friendships ($\beta = -.10, p = .25$).

Social Support from Father—When predicting depressive symptoms, the results were the same as for those described above with regard to mother-child relationships. Main effects were found for father support and anxious RS (Table 3). The interaction between friend support and anxious RS was probed as above. For adolescents who reported *low* support from friends, anxious RS was related to depressive symptoms ($\beta = .31, p = .01$), but for adolescents with high friendship support it was not ($\beta = .13, p = .30$).

When social anxiety was the dependent variable, once again, the results were the same as those described above for mother-child relationships. Main effects were found for friend support and anxious RS (Table 3). Probing the interaction, as above, revealed a significant, positive association between father support and social anxiety only for adolescents with *low* support from friends ($\beta = .23, p = .01$). For adolescents with high friend support, father support was not related to social anxiety ($\beta = -.00, p = .97$).

Parental Social Support and Angry Expectations of Rejection

Social Support from Mother—When depressive symptoms was the dependent variable (Table 4), the three-way interaction between angry RS, mother support, and friend support was significant, along with the two-way interaction between angry RS and mother support, and the main effect of mother support. To probe the three-way interaction, values for mother support and friend support were chosen to correspond to one SD above the mean (high) and one SD below the mean (low). Interaction probing revealed that the relationship between angry RS and depressive symptoms was significant for adolescents who reported low support from both mothers and friends ($\beta = .22, p = .03$). The association between angry RS and depressive symptoms for all other groups was not significant (low friend-high mother, $\beta = -.002, p = .99$; high friend-low mother, $\beta = .12, p = .19$; high friend-high mother, $\beta = .01, p = .92$; Fig. 1).

When social anxiety was the dependent variable, the two-way interactions involving angry RS and friend support, and mother support and friend support were significant, as well as the main effect of friend social support. Probing the interaction between angry RS and friend support revealed that the only significant association between angry RS and social anxiety was for adolescents with the *highest* support from friends; the simple slope for this group was *negative* and significantly different from zero ($\beta = -.17, p = .001$). The relation between angry RS and social anxiety was not significant for youth with low friend support ($\beta = .05, p = .42$).

Probing of the mother support and friend support interaction revealed that the only significant association between mother support and social anxiety was for adolescents with the *lowest* support from friends; the simple slope for the low friend support group was *positive* and significantly different from zero ($\beta = .17, p = .03$). For adolescents with high friend support, mother support was not related to social anxiety ($\beta = -.11, p = .18$).

Social Support from Father—When depressive symptoms was the dependent variable (see Table 5), the three-way interaction between angry RS, father support, and friend support was significant, along with the two-way interaction between angry RS and friend support, and the main effect of father support. The three-way interaction was probed as described above, using one SD above and below the mean for father support and friend support. Only for adolescents who reported low support from both fathers and friends ($\beta = .24, p = .02$) was angry RS related to depressive symptoms. The association between angry RS and depressive symptoms for all other groups was not significant (low friend-high father, $\beta = .09, p = .43$; high friend-low father, $\beta = .09, p = .36$; high friend-high father, $\beta = .04, p = .68$; Fig. 2).

When social anxiety was the dependent variable, the two-way interactions involving angry RS and friend support, and father support and friend support were significant, as well as the main effect of friend support. Probing the angry RS and friend support interaction revealed that the only significant association between angry RS and social anxiety was for adolescents with the high support from friends; the simple slope for the *high* group was *negative* and significantly different from zero ($\beta = -.17, p = .001$). The relation between angry RS and social anxiety was not significant for youth with low friend support ($\beta = .04, p = .49$).

Probing of the father support X friend support interaction revealed that the only significant association between father support and social anxiety was for adolescents with the *lowest* support from friends; the simple slope for the low friend support group was *positive* and was significantly different from zero ($\beta = .21, p = .001$) but the slope for adolescents with high friend support was not significant ($\beta = -.001, p = .99$).

Discussion

Previous research has linked anxious and angry RS with anxiety and depression (Harper et al. 2006; Feldman and Downey 1994; London et al. 2007) and supportive parent and friend relationships with psychological well-being (e.g., Bukowski et al. 2009; Laursen and Collins 2009). However, no previous study had examined how concurrent perceptions of relationships with both parents and friends may moderate associations between RS and internalizing problems. The current study examined this question as well as how angry and anxious RS uniquely related to social anxiety and depressive symptoms during middle adolescence.

Analyses revealed that both forms of RS were positively associated with depressive symptoms and anxiety, findings that are consistent with the growing literature indicating that these negative relational schemas are associated with general indices of adolescent maladjustment (e.g., Harper et al. 2006; London et al. 2007). Our regression analyses revealed a more nuanced picture, in that anxious RS was *uniquely* associated with social anxiety and depressive symptoms whereas angry RS was not. Together, these findings replicate London et al.'s (2007) findings with younger adolescents (6th graders; 11 year olds) and provide additional support for the proposition that anxious expectations of rejection reflect a "flight" response (London et al. 2007) and are more strongly related to internalizing problems than are angry expectations of rejection (Downey et al. 1998b).

Generally, the study provided additional evidence that close, supportive, positive friendships may buffer "at-risk" children and adolescents from negative outcomes (e.g., Laible et al. 2000; Laursen et al. 2007; Rubin et al. 2004). For instance, anxious RS was associated with depression, but only for those adolescents with unsupportive friendships. Thus, it seems that anxiety provoking expectations about rejection may not be linked with depression when a positive, supportive relationship with a friend offers the social provisions and social assurance which are needed.

Furthermore, we found that for adolescents with unsupportive relationships with both their parents and friends there was a significant and positive association between angry RS and depression. In comparison, for adolescents with at least one supportive relationship, angry RS was not predictive of depressive symptoms. This finding builds on previous research which has reported that adolescents who perceived that social support was lacking from both parents and peers were more depressed compared to youth who felt supported by either peers or parents (e.g., Laible et al. 2000), but is the first to demonstrate the importance of having at least one supportive relationship in a study of angry RS. Additional research into the interactive nature of these relationships in adolescence is clearly needed (especially since the effect size for this three-way interaction was small), but we speculate that the absence of positive relationships with the "most" significant others during middle adolescence (parents, friends) may reinforce angry rejection expectations, leading anger to be directed inwardly (Busch 2009), and increasing the likelihood the individual will become depressed. As Downey and Feldman (1996) have suggested that supportive relationships may have the potential to alter expectations about rejection, researchers would do well to examine whether changes in RS relate to changes in adjustment over time, and whether the formation and maintenance of close, supportive relationships modify these associations.

It was somewhat surprising that we found that for adolescents with supportive friendships, angry RS was negatively associated with social anxiety. However, London et al. (2007) found that when anxious RS was controlled, angry RS was negatively associated with social anxiety a few months later. We suggest that angry RS may partially reflect a narcissistic personality and a high, unstable (or insecure) self-esteem (Baumeister 1997). Individuals with high, unstable self-esteem are prone to anger, hostility, and aggression (Salmivalli et al. 1999), likely because they value rewards associated with aggression and belittle their victims (Menon et al. 2007). Similarly, narcissists externalize blame, may be easily threatened in potential rejection situations, and overreact with anger and aggression when they perceive offense (Baumeister 1997; Twenge and Campbell 2003). Further, both narcissism and high self-esteem are negatively related to anxiety (Harter 1998; Twenge and Campbell 2003). If angry RS is related to narcissism and high, unstable self-esteem, it may partially explain why, in combination with perceived friend support which further bolsters feelings of assuredness (Bukowski et al. 2009), angry RS is inversely related to social anxiety. As the peer world is socially central for adolescents, when youth with these

tendencies feel highly supported by friends, they may be even less likely to feel socially anxious. However, this result should be interpreted cautiously and more research is needed.

Some researchers suggest that positive relationships with parents buffer against poor relationships with peers (Patterson et al. 1989), others find that positive relationships with peers buffer against poor relationships with parents (Gauze et al. 1996). Still yet, other researchers find that it is the *number* of supportive relationships, not the particular configuration, which is linked to positive adjustment outcomes (Laursen and Mooney 2008). Consistent with these reports, we found evidence suggesting that supportive relationships with parents can buffer the association between angry RS and depression, when friendship support is low. But we also found that for adolescents who perceived their best friendships to be *low* in support, parental social support from both mothers and fathers indicated a risk for elevated social anxiety. We are not the first to report results wherein support was linked to greater adjustment difficulties (e.g., Laird et al. 1999; Young et al. 2005). There may well be circumstances in which relationship support exacerbates problems. However, it is also possible that child characteristics, like RS and lack of friend support, elicit specific responses from parents. Thus, it may be that youth who are sensitive to rejection, lack good friendships, and are socially anxious elicit extra support from parents who are concerned about their well-being. Order of effects conclusions are beyond the purview of correlational studies such as this one. Thus, further research is needed to examine these different possibilities.

One limitation of the current study was its reliance on self-report measures, increasing the likelihood that associations were due to shared method variance. Concerns about shared reporter variance are somewhat ameliorated by the systematic finding of higher order interactions, which are not typical of systematic reporting biases. However, as our constructs of interest included social-cognitive biases, perceived social support, and internalizing difficulties, all constructs that are based in an individual's perception of their own social circumstances, it may in fact be most appropriate to use self-report measures. Nonetheless, future work that assesses internalizing symptoms through parental or friend report, or which asks parents and friends to report on the social support that they provide the target, would certainly strengthen the validity of the findings herein.

As noted above, another limitation of the current study was its cross-sectional design. All constructs were measured in the 9th grade; thus, it was not feasible to examine longitudinal predictive relationships between our constructs of interest. In the future, researchers should examine whether the long-term relationships between RS and emotional adjustment are cyclical in nature. We would hypothesize that individuals who expect peer rejection may be more likely to behave in accord with these expectations, thereby acting either anxiously or aggressively in school. Their expectations, and subsequently their behaviors, may further damage their interpersonal relationships, and lead to increased negative perceptions of their social world, depressive symptoms and social anxiety. Thereafter, feelings of depression and social anxiety may predict further expectations of rejection in interpersonal interactions. The longitudinal examination of RS, the quality of social relationships, and adjustment would refine a model about how these variables are casually related.

Future research would also do well to examine how RS is related to externalizing problems in adolescence as well as how these associations may be modified by close, supportive relationships with parents or peers. As of yet, few investigations have examined RS and adolescent externalizing problems. The extant research that does examine "bad behavior" has been limited to childhood aggression and conflicts with school personnel (e.g., Downey et al. 1998b) or to hostile and negative behavior in adult romantic conflict (e.g., Downey et al. 2000). There is some evidence that friendships can protect at-risk children from

developing externalizing problems even when these friends are aggressive (e.g., Criss et al. 2002), however, there are also indications that aggressive friends may influence youth to be more aggressive or antisocial (e.g., Laird et al. 1999). Thus, the examination of how friendship support and the characteristics of friends moderate how RS is associated with externalizing issues may be necessary. The examination of externalizing issues seems particularly relevant in efforts to better understand the unique predictive validity of angry RS compared to anxious RS.

As it is important to examine how friends' behaviors may moderate how RS is associated with externalizing issues, it may also be productive to examine the social-cognitive biases of both members of a friendship dyad. It is, as yet, unknown whether rejection-sensitive adolescents are likely to attract other rejection-sensitive adolescents as friends, and the adjustment implications of this potential pairing. For example, a dyad of rejection-sensitive adolescents may be more likely to co-ruminate about rejection, increasing the likelihood of both individuals becoming depressed (Rose et al. 2007). Research investigating RS in college students' romantic relationships has not indicated that anxious expectations of rejection are related amongst romantic partners (Downey et al. 1998a). Nevertheless, other research suggests that friends are likely to be similar in their beliefs and internalized states, as well as external characteristics (e.g., Hogue and Steinberg 1995), perhaps as a result of both selection and socialization processes. Friendships in which both partners are rejection-sensitive may not be long-lasting; also, they may not be likely to offer the supportive context that both partners may need. Alternatively, perhaps two rejection-sensitive friends may recognize this bias in each other and take care to be responsive and accepting in situations in which their partner may be particularly sensitive. Thus, an investigation of how friends' RS impacts the friendship and subsequent emotional adjustment seems warranted.

In summary, this investigation extends the existing research by demonstrating that rejection sensitivity places adolescents at-risk for anxiety and depression during middle adolescence, when peer acceptance and fear of rejection are of high significance and when intrapersonal stress is elicited by the transition from middle-to-high school (Rubin et al. 2006). Results also supported the hypothesis that supportive relationships, especially with friends, can protect youth from the negative internalizing costs of rejection sensitivity. Thus, it appears that rejection sensitivity during middle adolescence is most detrimental to adjustment when close, supportive relationships are absent.

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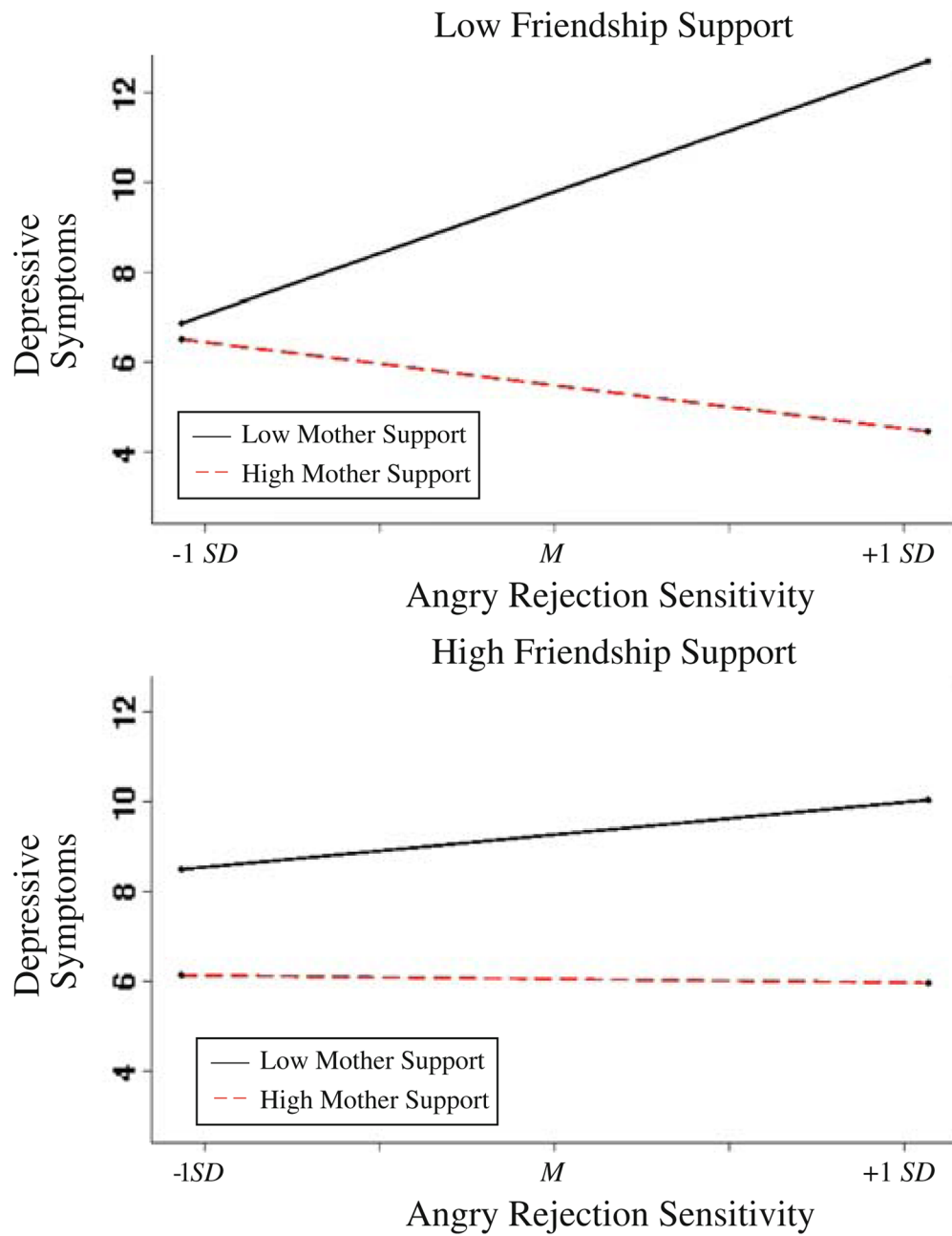


Fig. 1. Interaction between angry rejection sensitivity, mother social support, and friend support in the prediction of depressive symptoms

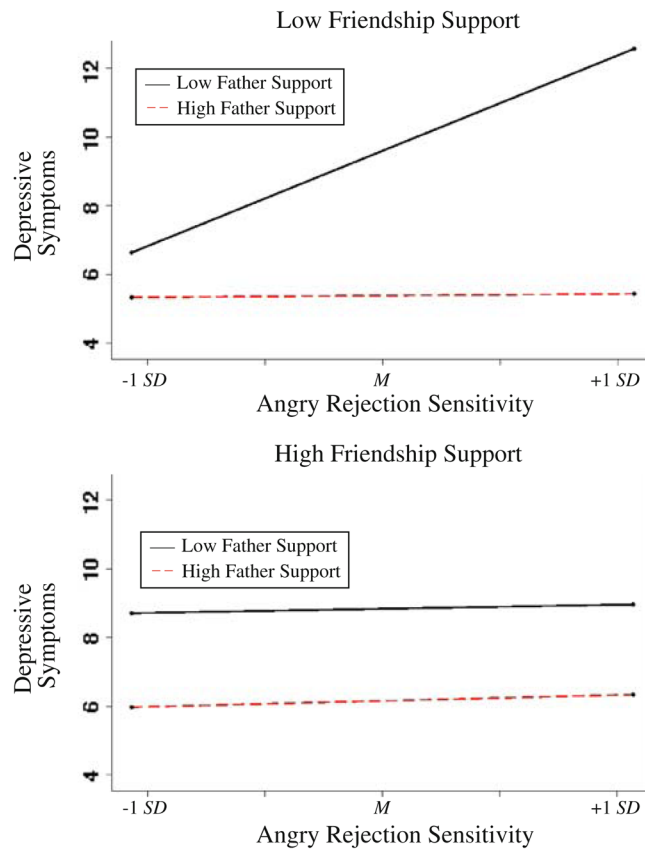


Fig. 2. Interaction between angry rejection sensitivity, father social support, and friend support in the prediction of depressive symptoms

Table 1

Descriptive statistics and associations among mother, father, and best friend social support, rejection sensitivity, and internalizing symptoms

	<i>M</i> (<i>SD</i>)	Mother social support	Best friend social support	RS: anxious exp.	RS: angry exp.	Social anxiety	Depressive symptoms
Father social support	3.71 (.76)	.60 ^{***}	.23 ^{***}	-.17 ^{***}	-.15 [*]	-.03	-.34 ^{***}
Mother social support	3.98 (.59)	–	.34 ^{**}	-.16 [*]	-.15 [*]	-.09	-.36 ^{**}
Best friend social support	3.95 (.61)		–	-.15 [*]	-.11	-.20 ^{**}	-.17 ^{**}
RS: anxious exp.	44.97 (26.37)			–	.72 ^{**}	.50 ^{**}	.50 ^{**}
RS: angry exp.	38.00 (21.36)				–	.33 ^{**}	.41 ^{**}
Social anxiety	8.41 (5.53)					–	.31 ^{**}
Depressive symptoms	7.29 (7.21)						–

RS rejection sensitivity

^{**} $p < .01$,

^{*} $p < .05$,

^{***} $p < .001$

Hierarchical regressions predicting depressive symptoms and social anxiety from anxious rejection sensitivity and social support from mothers and friends

Table 2

Step	Predictor	Depressive symptoms				Social anxiety			
		β	R^2	ΔR^2	f^2	β	R^2	ΔR^2	f^2
1	Sex	-.10	.18**	.18**	.22	-.12*	.12**	.12**	.14
	Angry RS	.41**				.33**			
2	MSS	-.28**	.34**	.17**	.24	.04	.28**	.16**	.22
	FrSS	-.04				-.17**			
	Anxious RS	.37**				.51**			
3	MSS \times anxious RS	-.05	.38**	.04**	.06	.02	.29**	.01	.01
	FrSS \times anxious RS	-.17*				-.10			
	MSS \times FrSS	.05				-.13*			
4	MSS \times FrSS \times anxious RS	.16	.39**	.01	.02	-.06	.30**	.00	.01

RS rejection sensitivity, MSS mother social support, FrSS friend social support

** $p < .01$,

* $p < .05$

Hierarchical regressions predicting depressive symptoms and social anxiety from anxious rejection sensitivity and social support from fathers and friends

Table 3

Step	Predictor	Depressive symptoms				Social anxiety			
		β	R^2	ΔR^2	f^2	β	R^2	ΔR^2	f^2
1	Sex	-.10	.18**	.18**	.22	-.12*	.12**	.12**	.14
	Angry RS	.41**				.33**			
2	FSS	-.24**	.33**	.15**	.22	.10	.29**	.17**	.24
	FrSS	-.06				-.19**			
	Anxious RS	.38**				.51**			
3	FSS \times anxious RS	-.09	.37**	.04**	.06	-.03	.30**	.01	.01
	FrSS \times anxious RS	-.14*				-.08			
	FSS \times FrSS	.05				-.12*			
4	FSS \times FrSS \times anxious RS	.07	.37**	.00	.00	-.06	.30**	.00	.00

RS rejection sensitivity, FSS father social support, FrSS friend social support

** $p < .01$,

* $p < .05$

Hierarchical regressions predicting depressive symptoms and social anxiety from angry rejection sensitivity and social support from mothers and friends

Table 4

Step	Predictor	Depressive symptoms				Social anxiety			
		β	R^2	ΔR^2	f^2	β	R^2	ΔR^2	f^2
1	Sex	-.07	.26**	.26**	.35	-.09	.25**	.25***	.33
	Anxious RS	.50**			.49**				
2	MSS	-.28**	.34**	.09**	.12	.04	.28**	.03*	.04
	FrSS	-.04			-.17**				
	Angry RS	.11			-.05				
3	MSS \times angry RS	-.16**	.39**	.05**	.08	-.03	.31**	.03*	.04
	FrSS \times angry RS	-.08			-.13*				
	MSS \times FrSS	.07			-.13*				
5	MSS \times FrSS \times angry RS	.13*	.41**	.01*	.03	-.05	.31**	.00	.00

RS rejection sensitivity, MSS mother social support, FrSS friend social support

**
 $p < .01$,

*
 $p < .05$,

 $p < .001$

Hierarchical regressions predicting depressive symptoms and social anxiety from angry rejection sensitivity and social support from fathers and friends

Table 5

Step	Predictor	Depressive symptoms				Social anxiety			
		β	R^2	ΔR^2	f^2	β	R^2	ΔR^2	f^2
1	Sex	-.06	.26**	.26**	.35	-.09	.25**	.25**	.33
	Anxious RS	.50**				.49**			
2	FSS	-.24**	.33**	.07**	.10	.10	.29**	.03**	.06
	FrSS	-.06				-.19**			
	Angry RS	.09				-.04			
3	FSS \times angry RS	-.08	.37**	.04**	.06	-.03	.31**	.02*	.03
	FrSS \times angry RS	-.13*				-.12*			
	FSS \times FrSS	.10				-.11*			
5	FSS \times FrSS \times angry RS	.13*	.38**	.01*	.02	-.05	.31**	.00	.00

RS rejection sensitivity, FSS father social support, FrSS friend social support

** $p < .01$,

* $p < .05$