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Coping with rejection concerns in romantic relationships: An experimental investigation of social anxiety and risk regulation

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ABSTRACT

Social anxiety tends to be examined from an intrapersonal perspective. Only recently have researchers started to explore social anxiety in the context of close relationships. In the current study, we investigated whether people with greater social anxiety respond defensively when the threat of being rejected by one's romantic partner becomes salient. Confronted with possible rejection, we hypothesized that people with greater social anxiety would devalue their partners to minimize the impact of the rejection. Fifty one couples participated in a laboratory interaction with one member assigned to a rejection condition—led to believe that their partner was listing excessive negative characteristics about them; the other member was assigned to a neutral condition in which they received an innocuous filler task. Results revealed a positive association between social anxiety and rejection concerns that could not be attributed to depressive symptoms, rejection sensitivity, attachment styles, or trust. People with greater social anxiety coped with these concerns by devaluing romantic partners following the rejection condition; in the neutral condition, they adopted an overly positive/enhanced perception of partners. Our findings illustrate the defensive, risk management strategies used by people with greater social anxiety in aversive relational contexts.

1. Introduction

Fear of negative evaluation is a core feature of social anxiety (Clark & Wells, 1995; Rapee & Heimberg, 1997; Hofmann, 2007), and biased information processing contributes to this fear. People with greater social anxiety overestimate the danger of social events (Foa, Franklin, Perry, & Herbert, 1996), believe others hold unexpressed expectations that they cannot meet (Alden & Wallace, 1995), and expect to be evaluated negatively by others (Leary, Kowalski, & Campbell, 1988). Because of this biased information processing, people with greater social anxiety experience an exaggerated feeling of risk in social interactions. This risk is managed primarily through hypervigilance to signs of negative evaluation (Gilboa-Schechtman, Foa, & Amir, 1999) and avoidance of distressing emotions and thoughts (e.g., Kashdan et al., 2013, 2014) as well as the situations that evoke them (Clark & Wells, 1995; Hofmann, 2007). People with greater social anxiety often avoid social interactions altogether or use safety behaviors such as avoiding eye contact, speaking little or in a low voice, or standing on the periphery of groups to try and reduce the likelihood of negative evaluation (Rapee & Heimberg, 1997).

Much literature on social anxiety focuses on how the fear of negative evaluation impacts the way people with greater social anxiety relate to people they are relatively unfamiliar with, but recent research suggests that social anxiety has detrimental effects on intimate relationships as well, particularly romantic relationships. People with greater social anxiety self-disclose less in their romantic relationships (Cuming & Rapee, 2010; Sparrevohn & Rapee, 2009; Wenzel, 2002), are more likely to be critical of partners during negative interactions (Wenzel, Graff-Dolezal, Macho, & Brendel, 2005), and experience diminished closeness to partners during the mutual expression of pain/distress (Kashdan, Volkmann, Breen, & Han, 2007).

How and why social anxiety impacts romantic relationships may be context-dependent. Limiting self-disclosure to romantic partners may be an avoidance behavior meant to prevent exposure to possible scrutiny and rejection. However, unlike in their less intimate relationships, people with greater social anxiety do not show a unilateral bias towards avoidance in their romantic relationships. Correlational studies have found that social anxiety is associated with both avoidance of intimacy with romantic partners and excessive dependence on romantic partners for emotional support (Darcy, Davila, & Beck, 2005; Grant, Beck, Farrow, & Davila, 2007). This suggests that certain contexts within

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romantic partners may make people with greater social anxiety particularly apt to exhibit avoidant behavior, while other contexts may lead them to exhibit dependent behavior.

2. Risk regulation system

In order to explore how context affects the way people with greater social anxiety relate to their romantic partners we draw on the The Risk Regulation Model (Murray, Holmes, & Collins, 2006), which provides an empirically-validated framework for understanding how people alter their behavior towards romantic partners depending on whether they feel the threat of rejection. In this model, people in romantic relationships balance the competing needs of feeling connected with their partner with the need to protect themselves against the potential pain of rejection from their partner. When a person believes that their partner perceives them negatively, they protect against the pain of rejection by diminishing the partner's value as a source of connection. When a person believes that their partner perceives them positively, they promote the partner's value as a source of connection. Risk regulation processes vary, and include physically withdrawing from a partner, reduced self-disclosure to a partner, aggressive behavior meant to persuade a partner to distance themselves, prioritizing other relationships as a source of connection, and direct partner devaluation—assessing a partner more negatively in order to reduce the impact of their rejection on one's self-esteem (Leary, Twenge, & Quinlivan, 2006).

Given that the fear of negative evaluation is a core feature of social anxiety, one might expect people with greater social anxiety to exhibit heightened risk regulation compared to the population at large. Outcomes from earlier studies suggest the exaggerated presence of behaviors that may be meant to regulate risk in people with greater social anxiety, for example that they self-disclose less often to their romantic partners (Cuming & Rapee, 2010; Sparrevohn & Rapee, 2009; Wenzel, 2002) and are more likely to be critical of their partners during negative interactions (Wenzel et al., 2005).

We sought to more directly test whether people with greater social anxiety experience heightened risk regulation via an experimental method. We chose to focus on the risk regulatory process of partner devaluation for both theoretical and practical reasons. From a theoretical perspective, we wanted to see if partner devaluation may be a link to why people with greater social anxiety are more critical of their partners during negative interactions (Wenzel et al., 2005) and experience diminished closeness to partners during the mutual expression of pain/distress (Kashdan et al., 2007). If a person with greater social anxiety is apt to perceive negative evaluation during negative interactions with their romantic partner and devalue them, it would make sense that they would then become more critical of their negatively-perceived partners and that any negative emotions disclosed to romantic partners during these interactions would be likely to cause resentment in the romantic partner and diminish closeness in the relationship. From a practical perspective, partner devaluation is a cognitive assessment rather than an expressed or enacted behavior, and thus can be experimentally induced without the potential of causing direct harm to a participant's romantic relationship, provided that participants are fully debriefed on the experimental manipulation prior to interacting with their romantic partners.

3. The present study

We investigated how people with greater social anxiety respond to the threat of rejection in their romantic relationships. Our hypothesis was that social anxiety would alter risk regulation by making people more aware of and concerned about threats of rejection from romantic partners, and more apt to devalue partners during these times. When the threat of rejection was absent, social anxiety was expected to be irrelevant to risk regulation strategies.

We recruited romantic couples and assigned them to either a rejection condition, in which they were experimentally induced to believe that their partner was listing a large number of negative characteristics about them, or a neutral condition, in which they were given a non-threatening filler task during the initial phase of the experiment. Our first hypothesis was that, among couple members in the rejection condition, social anxiety would predict greater concern about the rejection implied when partners list negative characteristics. To address construct specificity, we compared social anxiety to other factors that could be relevant to risk regulation including depressive symptoms (Nezlek, Kowalski, Leary, Blevins, & Holgate, 1997), attachment avoidance and ambivalence (Bradford, Feeney, & Campbell, 2002; Campbell, Simpson, Boldry, & Kashy, 2005; Tidwell, Reis, & Shaver, 1996), rejection sensitivity (Ayduk, Downey, Testa, Yen, & Shoda, 1999; Downey & Feldman, 1996; Downey, Frietas, Michaelis, & Khouri, 1998; Overall & Sibley, 2009), and interpersonal trust of one's partner (Wieselquist, Rusbult, Foster, & Agnew, 1999). Our second hypothesis was that social anxiety would moderate experimental condition such that people with greater social anxiety would be more likely to devalue romantic partners in the rejection condition, but not in the neutral condition. Specifically, we used partner assessments to gauge relational value and predicted that people with greater social anxiety in the rejection condition would assess partners more negatively after the induction, while people with greater social anxiety in the neutral condition would not significantly alter their partner assessments after the induction. Evidence in support of these hypotheses would suggest the contextual sensitivity of risk regulation by people with greater social anxiety.

4. Method

4.1. Participants

Our sample consisted of 51 couples recruited from a Mid-Atlantic university. Participants were recruited via flyers and the university's research participation system. We oversampled for people with high social anxiety with a subset of flyers that listed symptoms of social anxiety and requested participants who endorsed those symptoms who were also in a romantic relationship. For oversampled prospective participants, severity of social anxiety symptoms was assessed using the 20-item *Social Interaction Anxiety Scale* (SIAS; Mattick & Clarke, 1998), with inclusion in the study requiring a score of 25 or higher, which is 1 standard deviation about the population mean for social anxiety (Brown et al., 1997). All participants who contacted our research laboratory and were included in the study were assigned to the rejection condition (i.e. they were the 'target' participant), while their romantic partners were assigned to the neutral condition (i.e. they were the 'non-target' participant). Both partners had to participate in the study and couples needed to be dating for at least 3 months. The mean relationship length was 4.34 years (SD=5.41 years, range=4 months–25 years), the median length was 2.67 years, and 25.5% of couples reported that they were engaged or married.

The sample had a mean age of 23.93 (SD=6.8, range=18–51 years) and an ethnic composition of 71.6% Caucasian, 7.8% African American, 6.9% Asian American, 5.9% Hispanic, 1% Native American, and 6.9% other. Participants were compensated financially ($25) or given research credit for psychology classes.

4.2. Procedure

On arriving at the laboratory, each couple member was seated in a separate room where they were unable to see or speak to each other, to

complete a series of surveys that included measures of social anxiety, depression, attachment style, rejection sensitivity, trust of their partner, and an assessment of their partner's attributes (time 1).

Our initial goal was to induce the threat of rejection in the target participant but not the non-target participant. While separated, each couple member was told that they would fill out pencil-and-paper surveys identical to their partner, and that they would only receive the next survey once both couple members completed the prior one. Both members received and completed three brief innocuous filler surveys one at a time to acclimate them to this system. On the fourth survey, the target participant received a survey asking them to list negative characteristics of their partner, while the non-target participant received an innocuous survey asking them to list as many items as they could think of in their current residence. This deception led the target participant to believe that their partner was spending an excessive amount of time listing negative characteristics about them. Given the possibility that couple members could finish the fourth survey in roughly equivalent amounts of time, the target participant was forced to wait two minutes after they completed the fourth survey before they were notified that their partner had finished. This ensured time for the threat of rejection to set in. Previous research (Murray, Derrick, Leder & Holmes, 2008; Murray, Rose, Bellavia, Holmes, & Kusche, 2002) has shown that this induction effectively generates the threat of rejection.

Following the induction phase, participants were instructed to fill out another brief set of online surveys. These surveys included a measure of rejection concern as well as the same assessment of partner attributes (time 2) that had been completed prior to the induction. Participants were then debriefed.

4.3. Outcome measures

Rejection concern. Target participants received one item that asked how concerned they were by the fact that their partner was writing about negative features of their personality ('1'='not at all concerned', '9'='extremely concerned'). Rejection concern scores are based on target participants' response to this item. Given that our experimental induction involved deception, we selected a 1-item measure in an attempt to avoid arousing suspicion in our participants regarding our intent to induce rejection concern in target participants. Previous research (Murray et al., 2002) has used this 1-item scale and found it capable of detecting significant differences in level of rejection concern between target and non-target participants.

Partner assessments. Evaluations of five separate partner attributes (intelligence, physical attractiveness, social skill, athletic ability, and artistic ability) were assessed using the 5-item *Self-Attributes Questionnaire-Partner Version* (SAQP; Swann, De La Ronde, & Hixon, 1994). Each item asked participants to use a 10-point Likert scale to place their partners in a percentile range for a given attribute compared to same age peers(e.g. '1' corresponds to 'Bottom 5%'and '10' corresponds to 'Upper 5%'). The scale yields a summed score.

4.4. Predictors

Demographic questionnaire. Items included questions on age, sex, and race/ethnicity.

Social anxiety. Severity of social anxiety symptoms was assessed using the 20-item *Social Interaction Anxiety Scale* (SIAS; Mattick & Clarke, 1998). The SIAS uses a 5-point Likert scale of 0 (not at all) to 4 (extremely) to measure how anxious a person is in a variety of social interactions. In prior studies, the SIAS reliably distinguished between people diagnosed with social anxiety disorder and non-clinical samples (Brown et al., 1997).

4.5. Covariates

Depression. Severity of depressive symptoms was assessed using the 21-item *Beck Depression Inventory-II* (BDI-II; Beck, Steer, & Brown, 1996). Responses are provided using a 4-point Likert scale with higher scores representing more severe depressive symptoms.

Attachment style. Two separate dimensions of attachment style, ambivalence and avoidance, were assessed using the 17-item *Adult Attachment Questionnaire* (*AAQ*; Simpson, Rholes, & Phillips, 1996). The 8-item ambivalence subscale assesses the tendency to have conflicted thoughts and feelings as to whether others can be counted on in relationships (e.g. 'I find it difficult to trust others completely'). The 9-item avoidance subscale assesses the tendency to avoid or withdraw from closeness in relationships (e.g. 'I don't like people getting too close to me'). All items were rated on a 7-point Likert scale ('1'='strongly disagree', '7'='strongly agree').

Rejection sensitivity. Rejection sensitivity was assessed with the Rejection Sensitivity Questionnaire (RSQ; Downey & Feldman, 1996). The RSQ presents 9 theoretical social situations in which the participant must ask significant others for help and for each one asks how likely it is that they will be rejected ('1'=very unlikely, '6'=very likely) and how concerned they would be about being rejected ('1'=very unconcerned, '6'=very concerned). Each item then generates a composite score based on the person's anxious concern minus their belief that they will receive help.

Trust. Trust of one's romantic partner was assessed using the 17-item Trust Scale (Rempel, Holmes, & Zanna, 1985). Items measure the degree to which a person believes that their romantic partner will act in a predictable, dependable, and caring manner towards them (e.g. 'I can rely on my partner to keep the promises he/she makes to me'). All items were rated on a 7-point Likert scale ('−3'='Strongly Disagree', '0'='Neutral', '3'='Strongly Agree').

5. Results

5.1. Preliminary analyses

Means, standard deviations, zero-order correlations, and alpha reliability coefficients for measures provided to all participants are presented in Table 1. There were no significant mean differences between target and non-target participants for any of the measures. The mean level of rejection concern reported by target participants on the 1–9 Likert scale was 4.28 (SD=2.67). All measures had acceptable internal reliability.

We expected there to be a mean difference target and non-target participants on social anxiety, however we had several non-target participants who scored high on social anxiety who brought up the average for that group. In the target group the mean level of social anxiety was 21.92 (SD=12.79) and in the non-target group the mean level was 19.28 (SD=10.93). Both of these were above the population mean of 14.3 (SD=11) (Brown et al., 1997). We oversampled for social anxiety in the target condition to increase the sensitivity of our analyses to social anxiety's effect on the threat of rejection. The heightened presence of social anxiety in the neutral condition may have increased the sensitivity of our analyses to any effect social may have had in the neutral condition; we hypothesized that it would not have an effect in the neutral condition.

5.2. Data analytic strategy

Our first hypothesis test focused on the association between social anxiety and rejection concern in target participants, and was assessed using multiple regression analysis. Our second hypothesis focused on social anxiety and risk regulation (defined by changes in how romantic partners were assessed before and after the induction

Table 1
Means, standard deviations, and internal consistency coefficients for, zero-order relations and alphas for primary variables.

	Social anxiety	Depression	Attachment avoidance	Attachment ambivalence	Rejection sensitivity	Trust
Social anxiety	–	–	–	–	–	–
Depression	.38**	–	–	–	–	–
Attachment avoidance	.36**	.30**	–	–	–	–
Attachment ambivalence	.35**	.44**	.49**	–	–	–
Rejection sensitivity	.53**	.40**	.39**	.40**	–	–
Trust	−.03	−.19	−.12	−.21*	−.39**	–
M	20.35	8.52	28.29	26.18	7.19	28.44
SD	11.88	6.91	8.94	9.94	3.38	14.02
α	.85	.84	.75	.80	.71	.84

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

phase of the experiment). This hypothesis used the full sample. To account for the non-independence of couples with individuals nested within couples (Kenny, Kashy, & Cook, 2006), we analyzed the data using a series of multilevel models with HLM 6.0 (Raudenbush, Bryk, Cheong, & Congdon, 2000).

5.3. Hypothesis one: social anxiety and rejection concern

Our first hypothesis was that among target participants, greater social anxiety would be associated with greater concern about partners listing negative characteristics about them. Prior to conducting our main analysis we tested whether gender or relationship length interacted with social anxiety in predicting rejection concern. These ancillary analyses did not lead to any statistically significant effects ($ps > .20$). Given these results, gender and relationship length were excluded from the main analysis. We assessed the construct specificity of social anxiety by controlling for other constructs that could influence rejection concern, including depressive symptoms, attachment avoidance and ambivalence, rejection sensitivity, and interpersonal trust. Results of our regression analysis are summarized in Table 2. As hypothesized, social anxiety predicted greater rejection concern, $B = .08$, $SE = .03$, $t(48) = 2.59$, $p < .01$. No other predictors were statistically significant.

5.4. Hypothesis two: social anxiety and risk regulation

Our second hypothesis was that there would be an interaction between social anxiety and condition on changes in partner assessments from before the induction phase (at time 1) to after the induction phase (at time 2) of the experiment. Specifically, we hypothesized that for target participants, social anxiety would predict more negative partner assessments, while for non-target participants social anxiety would not predict a significant change in partner assessments.

A residual change score analysis was used, with partner assessments at time 2 entered as the outcome variable. As a covariate, the partner assessment at time 1 was grand-mean centered and added to the level-1 model. As additional predictors in the level-1 model, we added social anxiety (grand-mean centered), condition (uncentered), and the interaction between social anxiety and condition (grand-mean centered). Per recommendations for multilevel modeling analyses with dyadic data (Campbell & Kashy, 2002), the error term was only added to the intercept at level-2. The equation for this analysis was

$$\text{Partner assessment at time 2} = \beta_0 + \beta_1[\text{partner assessment at time 1}] + \beta_2[\text{social anxiety}] + \beta_3[\text{condition}] + \beta_4[\text{social anxiety} \times \text{condition}] + r$$

$$\beta_0 = \gamma_{00} + u_{0j}$$
$$\beta_1 = \gamma_{10}$$
$$\beta_2 = \gamma_{20}$$

Table 2
Hierarchical regression model of social anxiety uniquely predicting rejection concern over partners listing negative characteristics.

	Coefficient	Standard error	*t* ratio
Intercept	2.07	1.56	1.22
Social anxiety	.08	.03	2.59**
Depression	.04	.07	.59
Attachment avoidance	.03	.05	.65
Attachment ambivalence	.01	.04	.18
Rejection sensitivity	.02	.14	.114
Interpersonal trust	−.05	.03	−1.67

Note: Coefficients are unstandardized. All *p*-values are 2-tailed, *$p < .05$. The sample reflected in the table is all the participants in the rejection condition.
** $p < .01$.

Table 3
Multilevel regression model of the interaction between social anxiety and condition predicting changes in partner assessments.

	Coefficient	Standard error	*t* Ratio
Intercept	35.81	.20	181.87**
Partner assessment at Time 1	.98	.03	28.59**
Social anxiety	−.01	.02	−.347
Condition	.10	.15	.64
Social anxiety × condition	−.47	.17	−2.71**

Note: Coefficients are unstandardized. All *p*-values are 2-tailed, *$p < .05$.
** $p < .01$.

$$\beta_3 = \gamma_{30}$$
$$\beta_4 = \gamma_{40}$$

As hypothesized, the interaction between social anxiety and condition significantly predicted changes in partner assessments, $B = -.47$, $SE = .17$, $t(94) = -2.71$, $p < .01$. Results of our multilevel analysis are summarized in Table 3. The interaction was explored using simple slopes analysis (Aiken & West, 1991), with social anxiety conditioned at one standard deviation above and below the mean. In line with hypotheses, greater social anxiety predicted more negative partner assessments in the rejection condition, $B = -.47$, $SE = .17$, $t(94) = -2.77$, $p < .01$.Unexpectedly, social anxiety also predicted more positive partner assessments following the neutral condition, $B = .46$, $SE = .17$, $t(94) = -2.63$, $p < .01$. Results are graphed in Fig. 1.

6. Discussion

In this study we presented evidence that social anxiety is positively associated with the amount of concern experienced when the threat of rejection from a romantic partner is present, as well as

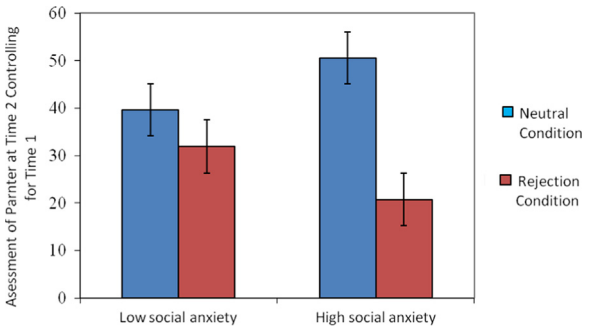

Fig. 1. Graph of the interaction between social anxiety and condition on partner evaluation at time 2, controlling for time 1. *Note:* Outcome measure reflects partner assessment at time 2, controlling for time 1. Higher scores indicate a more postive partner assesment.

part-
ner devaluation when such a threat is present. Social anxiety is also associated with a positive enhancement of romantic partner value when there is no apparent threat of evaluation or rejection. These findings suggest that social anxiety may amplify the risk regulation process by which people in romantic relationships balance the competing needs of feeling connected with their partner with the need to protect themselves against the potential pain of rejection from their partner. Consistent with our hypotheses, people with greater social anxiety appear apt to prioritize self-protection when the threat of rejection is present by devaluing their partners. Our unexpected finding that target participants in the neutral condition endorsed greater partner value following the innocuous induction suggests
that there are situations when people with greater social anxiety are more apt than others to prioritize connectedness to their partners through enhanced perception of their partner. This context-based risk regulation helps explain how social anxiety could be associated with both avoidant and dependent behavior in romantic relationships (Darcy et al., 2005; Grant, Beck, Farrow, & Davila, 2007): people with greater social anxiety may engage in strategic avoidance when they perceive the threat of rejection and strategic dependence when threat cues are absent.

Our findings on rejection concern and partner devaluation may help illuminate earlier findings in the literature on social anxiety and romantic relationships. Current research suggest people with greater social anxiety self-disclose less in romantic relationships (Cuming & Rapee, 2010; Sparrevohn & Rapee, 2009; Wenzel, 2002), are more likely to be critical of their partners during negative interaction (Wenzel et al., 2005), and experience diminished closeness to partners during the mutual expression of pain/distress (Kashdan et al., 2007). Our finding that people with greater social anxiety are more concerned about potential rejection from romantic partners could explain why they self-disclose less, since self-disclosure opens them up to the possibility of scrutiny and rejection. Our finding on partner devaluation in threatening contexts may partially underlie why people with greater social anxiety experience diminished closeness during the expression of mutual pain/distress: If a person with greater social anxiety is apt to perceive negative evaluation during negative interactions with their romantic partner and devalue them, it would make sense that they would then become more critical of their negatively-perceived partners. Any negative emotions disclosed to romantic partners during these interactions would be likely to cause resentment in the romantic partner and diminish closeness in the relationship.

The finding that people with greater social anxiety promote connection to their partners when the threat of rejection is absent is surprising given that people with greater social anxiety have been shown to exhibit deficits in approach motivation, positive events, and positive experiences (Kashdan et al., 2013; Kashdan, Weeks, & Savostyanova, 2011; Taylor & Amir, 2012). It may be the case that, when there are no obvious signs of rejection, romantic relationships generate sufficient emotional security to help people with greater social anxiety feel comfortable prioritizing their need for connection over their need for self-protection. The value of established security in a relationship can be observed in one experience sampling study which found that social anxiety was associated with the desire to escape social interactions involving unfamiliar companions, but not from close companions, and that social anxiety was associated with significantly greater self-consciousness and negative affect with unfamiliar compared with close companions (Brown, Silvia, Myin-Germeys, & Kwapil, 2007). This research suggests that when people high in social anxiety grow close to another person, their natural tendencies to view social interactions negatively and flee from them may be attenuated. Romantic relationships afford the greatest degree of closeness of any type of relationship, and it may be that the closeness developed in these relationships allows people high in social anxiety to feel enough safety to override their natural risk-averse tendencies and seek out connection. Our finding suggest that if this is the case then such safety and connection-seeking behavior is fragile, and is easily disrupted when the threat of rejection has been activated by the current situation or context.

Limitations to our methodological design prevent us from drawing definitive conclusions about whether people with greater social anxiety connect to their partners in the absence of rejection threat. It is interesting that people with greater social anxiety in the neutral condition could promote connection to their partners when nothing of significance was directly induced. This finding suggests that merely participating in a study with their romantic partner may have been significant to them. In the absence of any signs of negative evaluation from partners in the neutral condition, people with greater social anxiety may have promoted connection to their partners as means of seeking security in an otherwise anxiety-provoking, novel situation. It would have been valuable to take pre and post induction emotion measurements to test such a possible alternative explanation. Our finding that people with greater social anxiety experienced greater rejection concern in the rejection condition is also psychometrically limited. Given that the outcome was based on response to a single item, we are limited to assuming that that item is face valid since we cannot assess its internal reliability.

While we are limited in the conclusions to be drawn about findings related to the neutral condition, we believe that the demonstration of partner devaluation by people with greater social anxiety in the rejection condition was robust. Prior work suggests that people with excessive social anxiety are more likely to attend to the possibility of negative evaluation in ambiguous situations (Gilboa-Schechtman et al., 1999). Thus, the ambiguous feedback in the experimental induction was ideal for eliciting rejection concerns. Additionally, we were able to address construct specificity of social anxiety's effects in romantic relationships by controlling for depression, attachment avoidance and ambivalence, rejection sensitivity, and interpersonal trust. Social anxiety is frequently studied primarily as a phenomenon that gets activated in the real or imagined presence of relative strangers. Our finding that it was the sole significant predictor of rejection concern suggests that it can be activated in the context of romantic relationships and that it can make unique contributions to relationship dysfunction over and above relationship-specific variables such as attachment avoidance and ambivalence and interpersonal trust. This adds to a growing body of literature on the difficulties social anxiety creates in romantic relationships and underscores the value of continued research into how social anxiety not only disrupts the initial formation of bonds with relative strangers but can also create ongoing difficulties in intimate relationships that have already been formed.

In summary, our findings offer insight into how people with greater social anxiety manage the risks of rejection that arise in a

romantic relationship. It would be valuable for future studies to replicate and elaborate these findings using alternative methods, such as experience-sampling. For example, are people with social anxiety more apt to criticize or withdraw from their romantic partners on days following perceived rejection by partners? It would also be valuable to experimentally test whether there is a self-fulfilling prophecy for people with greater social anxiety. Do they respond to perceived rejection from their romantic partners by devaluing and criticizing them, leading to actual rejection? Given that people with social anxiety tend to lack strong social support networks (Torgrud, Walker, & Murray, 2004), understanding how their behavior influences closeness in romantic relationships has significant implications for their general well-being.

References

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage.

Alden, L. E., & Wallace, S. T. (1995). Social anxiety disorder and social appraisal in successful and unsuccessful interactions. *Behaviour Research and Therapy*, *33*, 497–506.

Ayduk, O., Downey, G., Testa, A., Yen, Y., & Shoda, Y. (1999). Does rejection elicit hostility in rejection sensitive women? *Social Cognition*, *17*, 245–271.

Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Beck depression inventory manual* (2nd ed.). San Antonio, TX: Psychological Corporation.

Bradford, S. A., Feeney, J. A., & Campbell, L. (2002). Links between attachment orientations and dispositional and diary–based measures of disclosure in dating couples: A study of actor and partner effects. *Personal Relationships*, *9*, 491–506.

Brown, L. H., Silvia, P. J., Myin-Germeys, I., & Kwapil, T. R. (2007). When the need to belong goes wrong: The expression of social anhedonia and social anxiety in daily life. *Psychological Science*, *18*, 778–782.

Brown, E. J., Turovsky, J., Heimberg, R. G., Juster, H. R., Brown, T. A., & Barlow, D. H. (1997). Validation of the social interaction anxiety scale and the social phobia scale across the anxiety disorders. *Psychological Assessment*, *9*, 21–27.

Campbell, L., & Kashy, D. A. (2002). Estimating actor, partner, and interaction effects for dyadic data using PROC MIXED and HLM: A user-friendly guide. *Personal Relationships*, *9*, 327–342.

Campbell, L., Simpson, J. A., Boldry, J., & Kashy, D. A. (2005). Perceptions of conflict and support in romantic relationships: The role of attachment anxiety. *Journal of Personality and Social Psychology*, *88*, 510–531.

Clark, D. M., & Wells, A. (1995). A cognitive model of social phobia. In: R. G. Heimberg, M. R. Liebowitz, D. A. Hope, & F. R. Schneier (Eds.), *Social phobia: Diagnosis, assessment, and treatment* (pp. 69–94). New York: The Guilford Press.

Cuming, S., & Rapee, R. M. (2010). Social anxiety and self-protective communication style in close relationships. *Behaviour Research and Therapy*, *48*, 87–96.

Darcy, K., Davila, J., & Beck, J. G. (2005). Is social anxiety associated with both interpersonal avoidance and interpersonal dependence? *Cognitive Therapy and Research*, *29*, 171–186.

Downey, G., & Feldman, S. I. (1996). Implications of rejection sensitivity for romantic relationships. *Journal of Personality and Social Psychology*, *70*, 1327–1348.

Downey, G., Frietas, A. L., Michaelis, B., & Khouri, H. (1998). The self-fulfilling prophecy in close relationships: Rejection sensitivity and rejection by romantic partners. *Journal of Personality and Social Psychology*, *75*, 545–560.

Foa, E. B., Franklin, M. E., Perry, K. J., & Herbert, J. D. (1996). Cognitive biases in generalized social phobia. *Journal of Abnormal Psychology*, *105*, 433–439.

Gilboa-Schechtman, E., Foa, E. B., & Amir, N. (1999). Attentional biases for facial expression in social phobia: The "face-in-the-crowd" paradigm. *Cognition and Emotion*, *13*, 305–318.

Grant, D. M., Gayle Beck, J., Farrow, S. M., & Davila, J. (2007). Do interpersonal features of social anxiety influence the development of depressive symptoms? *Cognition & Emotion*, *21*, 646–663.

Hofmann, S. G. (2007). Cognitive factors that maintain social anxiety disorder: A comprehensive model and its treatment implications. *Cognitive Behaviour Therapy*, *36*, 193–209.

Kashdan, T. B., Farmer, A., Adams, L., Ferssizidis, P., McKnight, P. E., & Nezlek, J. B. (2013). Distinguishing healthy adults from people with social anxiety disorder: Evidence for the value of experiential avoidance and positive emotions in everyday social interactions. *Journal of Abnormal Psychology*, *122*, 645–655.

Kashdan, T. B., Goodman, F. R., Machell, K. A., Kleiman, E. M., Monfort, S. S., Ciarrochi, J., & Nezlek, J. B. (2014). A contextual approach to experiential avoidance and social anxiety: Evidence from an experimental interaction and daily interactions of people with social anxiety disorder. *Emotion*, *14*, 769–781.

Kashdan, T. B., Volkmann, J. R., Breen, W. E., & Han, S. (2007). Social anxiety and romantic relationships: The costs and benefits of negative emotion expression are context-dependent. *Journal of Anxiety Disorders*, *21*, 475–492.

Kashdan, T. B., Weeks, J. W., & Savostyanova, A. A. (2011). Whether, how, and when social anxiety shapes positive experiences and events: A self-regulatory framework and treatment implications. *Clinical Psychology Review*, *31*, 786–799.

Kenny, D. A., Kashy, D. A., & Cook, W. L. (2006). *The analysis of dyadic data. New York: Guilford*.

Leary, M. R., Kowalski, R. M., & Campbell, C. D. (1988). Self-presentational concerns and social anxiety: The role of generalized impression expectancies. *Journal of Research in Personality*, *22*, 308–321.

Leary, M. R., Twenge, J. M., & Quinlivan, E. (2006). Interpersonal rejection as a determinant of anger and aggression. *Personality and Social Psychology Review*, *10*, 111–132.

Mattick, R. P., & Clarke, J. C. (1998). Development and validation of measures of social phobia scrutiny fear and social interaction anxiety. *Behaviour Research and Therapy*, *36*, 455–470.

Murray, S. L., Derrick, J. L., Leder, S., & Holmes, J. G. (2008). Balancing connectedness and self-protection goals in close relationships: A levels-of-processing perspective on risk regulation. *Journal of Personality and Social Psychology*, *94*, 429–459.

Murray, S. L., Holmes, J. G., & Collins, N. L. (2006). Optimizing assurance: The risk regulation system in relationships. *Psychological Bulletin*, *132*, 641–666.

Murray, S. L., Rose, P., Bellavia, G. M., Holmes, J. G., & Kusche, A. G. (2002). When rejection stings: How self-esteem constrains relationship-enhancement processes. *Journal of Personality and Social Psychology*, *83*, 556–573.

Nezlek, J. B., Kowalski, R. M., Leary, M. R., Blevins, T, & Holgate, S. (1997). Personality moderators of reactions to interpersonal rejection: Depression and trait self-esteem. *Personality and Social Psychology Bulletin*, *23*, 1235–1244.

Overall, N. C., & Sibley, C. G. (2009). When rejection sensitivity matters: Regulating dependence within daily interactions with family and friends. *Personality and Social Psychology Bulletin*, *35*, 1057–1070.

Rapee, R. M., & Heimberg, R. G. (1997). A cognitive-behavioral model of anxiety in social anxiety disorder. *Behaviour Research and Therapy*, *35*, 741–756.

Raudenbush, S. W., Bryk, A. S., Cheong, Y. F., & Congdon, R. T. (2000). *HLM (Version 6.0)*. Lincolnwood, IL: Scientific Software International.

Rempel, J. K., Holmes, J. G., & Zanna, M. P. (1985). Trust in close relationships. *Journal of Personality and Social Psychology*, *49*, 95–112.

Simpson, J. A., Rholes, W. S., & Phillips, D. (1996). Conflict in close relationships: An attachment perspective. *Journal of Personality & Social Psychology*, *71*, 899–914.

Sparrevohn, R. M., & Rapee, R. M. (2009). Self-disclosure, emotional expression and intimacy within romantic relationships of people with social phobia. *Behaviour Research and Therapy*, *47*, 1074–1078.

Swann, W. B., Jr., De La Ronde, C., & Hixon, J. G. (1994). Authenticity and positivity strivings in marriage and courtship. *Journal of Personality and Social Psychology*, *66*, 857–869.

Taylor, C. T., & Amir, N. (2012). Modifying automatic approach action tendencies in individuals with elevated social anxiety symptoms. *Behaviour Research and Therapy*, *50*, 529–536.

Tidwell, M. C. O., Reis, H. T., & Shaver, P. R. (1996). Attachment, attractiveness, and social interaction: A diary study. *Journal of Personality and Social Psychology*, *71*, 729–745.

Torgrud, L. J., Walker, J. R., & Murray, L. (2004). Deficits in perceived social support associated with generalized social anxiety disorder. *Cognitive Behaviour Therapy*, *33*, 87–96.

Wenzel, A. (2002). Characteristics of close relationships in people with social anxiety disorder; a preliminary comparison with nonanxious people. In: J. H. Harvey, & A. Wenzel (Eds.), *Maintaining and enhancing close relationships: A clinician's guide* (pp. 199–213). Mahway, NY: Lawrence Erlbaum Associates.

Wenzel, A., Graff-Dolezal, J., Macho, M., & Brendel, J. R. (2005). Communication and social skills in socially anxious and nonanxious people in the context of romantic relationships. *Behaviour Research and Therapy*, *43*, 505–519.

Wieselquist, J., Rusbult, C. E., Foster, C. A., & Agnew, C. R. (1999). Commitment, pro-relationship behavior, and trust in close relationships. *Journal of Personality and Social Psychology*, *77*, 942–966.