HOW TRAIT AND STATE SOCIAL ANXIETY IMPACT PERCEPTIONS OF
SUPPORT WHEN SHARING GOOD NEWS WITH ROMANTIC PARTNERS: USING
THE ACTOR-PARTNER INTERDEPENDENCE MODEL TO EXPLORE SELF-
REPORTS, PARTNER-REPORTS, AND BEHAVIORAL OBSERVATIONS

by

Panagiota Ferssizidis
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Committee:

_____ Director

_____

_____

_____ Department Chairperson

_____ Program Director

_____ Dean, College of Humanities
and Social Sciences

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A Dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at George Mason University

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Panagiota Ferssizidis
Master of Arts
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Director: Todd B. Kashdan, Associate Professor
Department of Psychology

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Fairfax, VA

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ABSTRACT

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Panagiota Ferssizidis, Ph.D.

George Mason University, 2013

Dissertation Director: Dr. Todd B. Kashdan

Information processing biases and positivity deficits are central to theories of social

anxiety (e.g., Clark & Wells, 1995; Hofmann, 2007; Kashdan, Weeks, & Savostyanova,

2011). Extending prior work on cognitive biases in social anxiety, the present study

examined whether individual differences in trait and state social anxiety alter the

perception of support provided and received when sharing good news with romantic

partners (i.e., capitalization support) and how this influences romantic relationship

satisfaction and commitment. In this study of 141 heterosexual couples (average age of

21.5 with 60% identifying as Caucasian), greater social anxiety during an interaction task

(i.e., state anxiety) was associated with misperceptions of support as assessed by self-

report, partner-report, and observer ratings. In addition, people were more likely to

underestimate their partner's supportiveness when their partner experienced greater state

anxiety during the interaction. Trait social anxiety did not significantly predict misperceptions of support when controlling for state anxiety. However, women with higher trait social anxiety had partners who reported lower commitment in the relationship. Both self and partner perceptions of support predicted relationship outcomes. For women, underestimating a partner's responsiveness was associated with lower relationship satisfaction and commitment. The impact of self-responsiveness on the relationship differed for men and women. Together, these findings may help researchers and clinicians better understand how self-evaluative concerns when interacting with close others contributes to skewed perceptions of reality and relational consequences.

INTRODUCTION

*Chris: G*uess what I just found out today? I'm getting a bonus at work! I'm so excited!

Kate: That's awesome! You totally deserve it after all your hard work. Tell me all about it.

Positive events occur with greater frequency in daily life than do negative events (Gable, Reis, & Downey, 2003). Yet far more attention has been paid to how relationship partners provide support during difficult times (Bolger, Zuckerman, & Kessler, 2000) than when sharing positive events, such as the one depicted above. The last decade has seen a modest rise in research focusing on how people share positive life events. Termed *capitalization*, this process is defined by the disclosure of good news to one's relationship partner in hopes of receiving a positive, supportive response from them.

Positive responses, similar to the one provided by Kate in the scenario above, are characterized as being active (interested and engaged in what one's partner has to say) and constructive (enthusiastic and encouraging elaboration). Active-constructive responses convey attentiveness and excitement for the disclosing partner and their positive event. This pattern of responding also encourages the disclosing partner (Chris) to share and elaborate upon the positive event with the responding partner (Kate). Sharing the event provides an opportunity for the disclosing partner to re-experience the positive

emotions associated with the event while facilitating a positive social interaction for both relationship partners (Gable, Reis, Impett, & Asher, 2004). This positive relational experience may explain why providing support following positive life events plays a larger role in contributing to relationship quality and longevity than does being a supportive partner following difficult life events (Gable, Gonzaga, & Strachman, 2006). The relational benefits of providing active-constructive responses include greater relationship satisfaction, investment, commitment, and intimacy, as well as relationship stability (Gable et al., 2004, 2006; Reis et al., 2010).

Not all responses to positive event disclosures are positive or supportive. Relationship quality is compromised when people respond to positive event disclosures in ways that are passive (attentive but without attempts to extend the conversation) or destructive (pointing out the downsides of an event or undermining its positivity). Passive and destructive responses convey disinterest in what is important to romantic partners. These response tendencies have been linked to greater conflict and decreased satisfaction, commitment, intimacy, and trust within a relationship (Gable et al., 2004).

Research on capitalization interactions has almost completely overlooked individual differences in how people respond when relationship partners share positive events. Two known attempts have been made to understand how individual differences might moderate the presence of positive responses to capitalization attempts. In a study examining the role of attachment insecurity on capitalization attempts, researchers found that people with avoidant and anxious attachment styles were perceived by partners as being less active and constructive following positive event disclosures. This was

especially true when their relationship partners also reported an insecure (anxious or avoidant) attachment style (Shallcross, Howland, Bemis, Simpson, & Frazier, 2011). Similarly, a second study found that when relationship partners both endorsed high social anxiety or depressive symptoms, people perceived themselves and their partners to be less supportive during capitalization interactions (Kashdan, Ferssizidis, Savostyanova, Adams, & McKnight, in press). Moreover, when people with high social anxiety or depression perceived their partner as being passive and destructive during capitalization attempts, they reported decreased relationship quality and a greater likelihood of breakup six months later.

Together, these studies highlight how emotional disturbances contribute to perceived failures in capitalization and subsequently, to relationship dysfunction. Yet in the presence of emotional distress, people may be more likely to inaccurately perceive support behaviors during capitalization interactions. Extensive research has shown that people with emotional disturbances, such as social anxiety, are more likely to misperceive personal attributes and the attributes of others (e.g., Gilboa-Schechtman, Presburger, Marom, & Hermesh, 2005; Kashdan & Savostyanova, 2011). Within a relationship, making an inaccurate assessment of a partner's responsiveness could have serious consequences for the relationship. In addition to possibly reducing the degree to which people share positive life events with their partners, perceiving a partner as less responsive (i.e., passive and destructive) is associated with poorer relationship outcomes (Gable et al., 2004; Reis et al., 2010). Thus, studying the presence of misperceptions during capitalization interactions may add to our understanding of why people with

emotional disturbances often struggle to have long-term, satisfying relationships. The proposed research addresses this gap by examining the accuracy with which socially anxious people perceive support behaviors following positive event disclosures, and how these perceptions of support impact relationship quality.

Social Anxiety and Romantic Relationships

Socially anxious people fear being scrutinized by others because they believe their behavior and perceived defects will prompt rejection (Clark & Wells, 1995; Rapee & Heimberg, 1997). As a result, they experience heightened anxiety reactions in social situations in which they believe they may be evaluated by others. In hopes of preventing undesirable social outcomes, socially anxious people become preoccupied with monitoring social threats and deflecting attention in social contexts (Heinrichs & Hofmann, 2001). This includes excessive attempts to avoid social contact and engaging in 'safety' behaviors (e.g., limited eye contact, talking very little) during social situations in hopes of avoiding the attention and evaluation of others (Clark & Wells, 1995). While these behaviors may reduce the likelihood of rejection, they also lead to rigid, constrained social behavior (Alden & Taylor, 2004) and deplete the cognitive resources needed to engage in and extract rewards from pleasurable social interactions (Heimberg, Brozovich, & Rapee, 2010; Kashdan, Weeks, & Savostyanova, 2011). Thus, social anxiety may interfere with the potential rewards of interactions by depriving an individual of those social encounters or disturbing the social process.

Given these interpersonal deficits, it is not surprising that socially anxious people are less likely than their less anxious peers to be in romantic relationships (Lampe, Slade,

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Issakidis, & Andrews, 2003; Schneier et al., 1994). When in a romantic relationship, socially anxious people report fewer positive relationship qualities such as intimacy and support (Cuming & Rapee, 2010; Sparrevohn & Rapee, 2009), less pleasurable sexual activity (Kashdan, Adams, Savostyanova, Ferssizidis, McKnight, & Nezlek, 2011), and greater avoidance of conflict, emotion expression, and self-disclosure (e.g., Davila & Beck, 2002). While informative, this research is limited by a reliance on obtaining reports of social anxiety symptoms and relationship functioning from a single informant. In other words, these studies did not address the interdependence of how the characteristics of one partner (e.g., high social anxiety) influence not only the self, but the thoughts, behaviors, and emotions of one's partner. Failure to account for both partners in a relationship limits the conclusions that can be drawn about how relationships function as the interpersonal characteristic (e.g., social anxiety) and processes (e.g. relationship functioning) examined are inherently dynamic with cyclical influences expected between partners.

Addressing these concerns, several studies have examined the impact of social anxiety on relationships by collecting information from both romantic partners in a couple. One study found that socially anxious people (but not their partners) report lower marital adjustment (Filsinger & Wilson, 1983). When examining how socially anxious people interact with romantic partners in laboratory interactions, Wenzel and colleagues (2005) found that socially anxious people display fewer positive behaviors and more extreme negative behaviors when socializing with partners. Also using a laboratory interaction paradigm, Beck, Steer, and Brown (2006) found that socially anxious women experienced greater distress when disclosing difficult life events to their partners, but

only when their partners displayed a high frequency of positive, supportive behaviors. The one longitudinal study published to date found greater social anxiety predicted the provision and receipt of less supportive responses to shared positive events as measured by self and partner reports; this reduction in perceived support was associated with decline in relationship quality and a greater likelihood of breakup six months later (Kashdan et al., in press). Together, these studies highlight the importance of studying the dynamic relational processes that exist for socially anxious people. The present study contributes to this line of research by obtaining data from both partners in a relationship in order to examine misperceptions of support during positive event disclosures and the relational consequences associated with inaccurate perceptions of support.

Trait and State Social Anxiety and Misperceptions of Support

Romantic partners have unique insight into each other's personalities. They are more likely to form accurate impressions of one another because they have greater access to each other's behavior across a range of situations. They also have greater access to one another's internal thoughts and feelings through communication with one another (Vazire, 2010). Studies on accuracy of perceptions show that people in romantic relationships are largely accurate in assessing their partner's personality, but they are also biased in how they view their partner (e.g., Beer & Watson, 2008; Uziel, 2011). For instance, most people tend to describe their relationship and partners in a more positive light than reality might suggest (see Gagne & Lydon, 2004 for a review). Indeed, this positivity bias appears to be a hallmark of many satisfying long-term relationships (Fletcher, Simpson, & Boyes, 2006; Murray, Holmes, & Griffin, 1996). However, there is

also evidence to suggest that more accurate partner and relationship representations are associated with better relationship functioning (De La Ronde & Swann, 1998) and that maintaining idealistic beliefs about one's relationship contributes to greater difficulty when relationships dissolve (Helgeson, 1994). One explanation for these discrepant findings is that bias and accuracy have traditionally been operationally defined in different (and not always consistent) ways. In the relationship literature, bias is typically defined as the degree of discrepancy between a person's perceptions of their partner or relationship with either an idealized prototype or a reality benchmark (i.e., mean difference scores) (Funder & Colvin, 1997). Accuracy, on the other hand, usually refers to the degree of correspondence between a person's perceptions and a benchmark for reality (i.e., correlation) (Funder, 1995). Empirical research has shown bias and accuracy to operate as independent processes, with people simultaneously holding both types of perceptions for various characteristics of their partner (for a review, see Fletcher & Kerr, 2010).

While bias is present to some degree anytime a person perceives and attempts to interpret their social world, some people show more biased thinking than others. For instance, people with emotional disorders, such as social anxiety, are especially likely to misperceive the world around them (e.g., Clark & Wells, 1995; Hofmann, 2007; Leary, 2000). For socially anxious people, the fear of evaluation and rejection leads to marked arousal in social situations. The triggering of anxiety during a social interaction (i.e., state anxiety) comprises cognitive, emotional, physiological, and behavioral changes that contribute to biased interpretations of self and others during social events (Clark, 2001).

For instance, greater anxiety is associated with a shift in attentional focus whereby an individual carefully monitors the self in potentially evaluative situations. This inward self-focus not only leads to disengagement from the interaction, but interferes with the ability to accurately process the situation and behavior of others.

In the context of relationships, biased or inaccurate assessments of a partner's responsiveness could have negative consequences for the health of the relationship. During capitalization attempts, misperceptions of support could contribute to the poorer relationship outcomes associated with passive and destructive response styles such as greater conflict and decreased satisfaction, commitment, intimacy, and trust (Gable et al., 2004; Reis et al., 2010). Moreover, socially anxious people may be particularly prone to misperceiving responsiveness following *positive* event disclosures. In addition to being more reactive to negative social stimuli, socially anxious people are more likely to discount or diminish the importance of positive events (Weeks, 2010) as well as to develop concerns about positive evaluation (Wallace & Alden, 1997). Together, these information processing biases may increase the likelihood of misperceiving support behaviors during positive social contexts, such as capitalization attempts.

Findings from laboratory studies on cognitive processing and neural networks have shown that socially anxious people are overly sensitive to negative information and less reactive to positive social cues such as happy faces (Gough & Thorne, 1986; Quadflieg et al., 2007; Silvia, Allan, Beauchamp, Maschauer, & Workman, 2006). Socially anxious people are also more likely to avert their attention from positive stimuli while fixating on negative stimuli (Chen, Clarke, MacLeod, & Guastella, 2012). In

addition to a tendency to diminish positive social cues and perseverate on negative social cues, socially anxious people are more likely to perceive neutral, or ambiguous, social information as negative (Stopa & Clark, 1995).

A similar pattern of misperception has been found in social situations. For example, socially anxious people are more likely to perceive themselves and expect others to perceive them as more negatively and less positively than they are actually viewed by interaction partners (Christensen, Stein, & Means-Christensen, 2003; Kashdan & Savostyanova, 2011; Wilson & Rapee, 2005). Social anxiety has also been linked to a tendency to underestimate performance and devalue personal attributes in social situations. Upon receiving positive feedback from others, socially anxious people tend to discount this feedback while simultaneously developing anxiety about being unable to reach these standards in the future (e.g., Wallace & Alden, 1997; Weeks, Heimberg, & Rodebaugh, 2008, 2008). Consistent with these findings, behavioral data show that socially anxious people are more likely to suppress the expression of positive emotions, respond less to social reward cues (Farmer & Kashdan, 2012; Heimberg et al., 2010; Turk, Heimberg, Luterek, Mennin, & Fresco, 2005), be less likely to reciprocate smiles, and more likely to act in an unassertive, submissive manner (Hopko, McNeil, Zvolensky, & Eifert, 2001; Russell et al., 2011; Rodebaugh, Gianoli, Turkheimer, & Oltmanns, 2010; Weeks, Heimberg, & Reinhardt, 2011).

In contrast to self-evaluation, the impact of social anxiety on perceptions of others is mixed. Some research has found that socially anxious people show a greater tendency to view interaction partners more negatively on positive attributes (i.e., negativity bias)

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(Alden & Taylor, 2004). Others, on the other hand, have found that socially anxious people tend to evaluate others in an overly positive light (i.e., positivity bias) (Mahone, Bruch, & Heimberg, 1993).

Taken together, these findings suggest that social anxiety might be linked to misperceptions of self and relationship partners. In particular, socially anxious people may be more likely to underestimate their own responsiveness during capitalization attempts and make erroneous perceptions (either negatively or positively skewed) of their romantic partner's attempts to be active and constructive. However, despite overwhelming evidence suggesting that socially anxious people perceive themselves more negatively in social situations, they also appear somewhat more comfortable in interactions they perceive as less threatening, such as in the company of close others (Clark & Wells, 2005). Thus, it is unclear as to whether interactions with romantic partners would elicit the elevations in state anxiety that set the foundation for misperceptions of self and others. Interestingly, very few attempts have been made to understand how the biases characteristic of people suffering from social anxiety present in the context of close, intimate relationships. The goal of this study is to extend this literature by assessing whether the presence of high levels of emotional distress—both trait and state social anxiety—interferes with the accuracy of assessing self and partner behavior.

The Present Research

This study tests whether the presence of trait and state social anxiety contribute to misperceptions of support when sharing good news with one's romantic partner and

whether the accuracy of perceptions predicts relational outcomes. Simultaneously

examining the effects of trait and state anxiety on perceptions of support and relationship

quality allows for a test of whether one, or both, of these processes contribute to

relational dysfunction.

Research Question 1

The first research question asks whether trait social anxiety, state social anxiety,

and/or the interaction of trait and state anxiety influence the accuracy with which

romantic partners estimate the support they provide to their partner and the support their

partner provides to them. Social anxiety has been linked to tendencies to diminish

positive, while amplifying negative, social content (e.g., Gough & Thorne, 1986; Eisner

et al., 2009). Moreover, socially anxious people are more likely to view their positive

qualities as more deficient than the actual views of interaction partners (e.g., Christensen,

Stein, & Means-Christensen, 2003; Gilboa-Schechtman et al., 2005; Kashdan &

Savosytanova, 2011). Thus, it was expected that compared to people with low trait and/or

state social anxiety, people with high anxiety would underestimate the supportiveness

they provide and receive when sharing positive events with their partner. It was also

hypothesized that there would be a significant interaction effect whereby high trait social

anxiety coupled with elevated state anxiety during the interaction would contribute to the

greatest misperceptions of self and partner responsiveness.

Extending this line of inquiry, the present research also examined whether people

with elevated levels of trait and state social anxiety would be more difficult to be

accurately evaluated by partners. It was hypothesized that, compared to partners with low

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trait and/or state anxiety, interacting with a partner with high trait or state anxiety would make it more difficult for that partner's responsiveness to be accurately estimated. In addition, interacting with a partner with high state anxiety was expected to contribute to underestimates of self-responsiveness as this context may detract attention away from oneself and onto one's partner.

Research Question 2

The second research question tests whether misperceptions of self and partner responsiveness are associated with relational outcomes. It was hypothesized that people who underestimate their partner's responsiveness to their positive event disclosures would report lower relationship satisfaction and commitment, and that their romantic partners would report similar relational costs. In contrast, people who overestimated their partners' responsiveness were hypothesized to report higher relationship quality, as were their partners. Misperceptions of self-responsiveness were also expected to impact the relationship. Specifically, it was hypothesized that overestimations of self-responsiveness would be associated with greater relationship satisfaction and commitment whereas the converse would be true for those who underestimated their responsiveness. Misperceptions of self-responsiveness were not expected to predict partner relational outcomes and were therefore not assessed in this study.

METHOD

Participants

The sample consisted of 141 heterosexual dating couples recruited from a Mid-Atlantic university and its surrounding community. Participants were recruited via flyers and online advertisements. Both partners had to participate in the study and couples needed to be dating for at least three months. The mean relationship length was 22.3 months ($SD = 19.2$); 64.5% of couples were together for at least one year and 19.2% were engaged or married. The sample had a mean participant age of 21.5 years ($SD = 4.4$) and an ethnic composition of 59.9% Caucasian, 13.8% Asian, 11.0% Latino/Hispanic, 3.2% Middle Eastern, 4.6% African American, 0.4% Native American, and 7.1% other. Socially anxious people were oversampled with a subset of advertisements targeting people who are in romantic relationships *and* experience intense anxiety in social situations. Couples were given research credit for psychology classes and if a partner was not a student, received financial compensation.

Procedure and Measures

Baseline Questionnaires

Participants attended two 1.5 hour laboratory sessions. Upon their arrival, couples provided informed consent and were then separated into private rooms to complete informed consent, demographic, personality, and baseline questionnaires. Descriptive data and internal reliability for questionnaires are reported in Table 1.

Social Interaction Anxiety Scale. This 20-item scale (Mattick & Clarke, 1998) measured fear and avoidance of social interactions due to concerns about being scrutinized by other people—the primary measure of social anxiety. Participants responded to items using a 5-point Likert scale ranging from 0 (*not at all characteristic of me*) to 4 (*extremely characteristic of me*). This scale has been shown to have strong reliability and validity across clinical, community, and student samples (Heimberg, Mueller, Holt, & Liebowitz, 1992; Mattick and Clarke, 1998).

Relationship Quality. Two subscales of the Relationship Investment Model Scale (Rusbult, Martz, & Agnew, 1998) were used to measure satisfaction and commitment to romantic relationships. Satisfaction subscale items assess the degree of positive versus negative feelings and thoughts experienced in the relationship (5-items; e.g., My relationship is close to ideal). Commitment subscale items measure a person's intent to remain in the relationship (7-items; e.g., I am oriented toward the long-term future of my relationship). Participants responded to items using a 9-point scale ranging from 1 (*not at all true/never true*) to 9 (*very true/true all of the time*). These scales have been shown to have strong convergent and discriminant validity as evidenced by large positive correlations with measures of marital adjustment and intimacy, and small associations with personality scales unrelated to social activity (e.g., Le & Agnew, 2003; Rusbult et al., 1998). The Investment Model distinguishes satisfaction and commitment as independent albeit related constructs, supported by factor analytic findings (Rusbult et al., 1998). These factors have been shown to differentially predict relationship outcomes (Bui, Peplau, & Hill, 1996; Impett, Beals, & Peplau, 2001).

Laboratory Experiment Discussion Tasks

   After separately completing baseline measures, couples were reunited and seated together on a couch to complete social interaction tasks involving the disclosure of positive and negative life events. One small camera was set up 10 feet away to capture both partners, and a microphone was placed at head-level behind the partners to clearly capture their voices. Couples participated in three separate interactions; two occurring on their first session and one on their second session scheduled one week later. In the initial interaction, couples discussed their first romantic date for five minutes. Participants were given one goal: to have a conversation about how they remember their first date. This interaction was used to acclimate couples to the experimental room, procedures, and videotaping equipment. Couples were left alone until a timer signaled the end of the task.

   Participants were then given a second interaction task in which they were asked to either share positive or negative events (counter-balanced across the first and second study appointments); a design used by Gable et al (2006). Before discussing positive events, partners received the following instructions from the experimenter:

   Now I would like for the two of you to take some time and think about a positive event that you have experienced but have not yet shared with your partner. You are free to choose any event that comes to mind, such as getting a good grade, talking to a childhood friend, an important project at school or your job, etc. This event can be anything good (big or small) that has either happened recently or that you anticipate happening in the future. However, it must be something that has been on your mind lately and that you have not yet shared with your partner. You will take turns talking about your events and you will decide who goes first.

When talking about your event, try to talk about it in as much detail as possible. When hearing about your partner's event you are free talk as much or as little as you wish. In both situations, try to engage in a conversation that is as close as possible to a normal interaction between you. You will have 6 minutes on the timer to complete this task. I will come in after the timer goes off. Do you have any questions? Now who will be the first to share the event?

Before discussing negative events, partners received similar instructions but with a focus on sharing "a time when you were facing a particular problem, concern, or stressor and felt that you could have used your partner's care and support and, for any reason, he/she was not present." The order in which partners chose to share their positive event was not related to level of social anxiety, $\chi^2(1, N = 227) = 0.07$, $p > .05$, or gender, $\chi^2(1, N = 227) = 0.15$, $p > .05$. After each interaction, couples independently completed questionnaires about their experience. Trained observers later coded the videotapes of positive event disclosures for particular behaviors.

Perceptions of Responsiveness. After each videotaped interaction (sharing positive and negative events), partners completed a 10-item version of the 18-item Responsiveness Scale (Reis, 2003), as used in Gable et al. (2006). This measure assessed how people believed their partner responded to shared positive events by understanding, validating, and showing care for them. Each item began with the stem, "When I told my partner about the good event that happened to me……" followed by statements such as "My partner was responsive to my needs" and "My partner really listened to me." Participants made ratings using a 7-point Likert scale ranging from 1 (*not at all*) to 7

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(*extremely*). Another set of questions focused on a self-assessment of responsiveness to

partner's shared positive events, with each of 10 items beginning with the stem "When

my partner told me about the good event that happened to him/her…" Thus, each person

rated their provision and receipt of capitalization support. Adequate reliability and

validity for this scale has been found in prior capitalization studies (e.g., Gable et al.,

2006).

   State Social Anxiety. This 5-item face-valid scale, created for this study,

measured cognitive and physiological aspects of state social anxiety during the

interaction task. Participants responded to items using a 7-point Likert scale ranging from

1 (*not at all true*) to 7 (*very true*). Items included: "I was focusing my attention on my

level of anxiety," "I was concerned about what other people would think about my

relationship" and "I was shaking or trembling." A single score was created such that

higher scores reflected greater perceived anxiety during the interaction. As evidence of

construct validity, this measure of state anxiety was significantly correlated with the well-

established measure of trait social anxiety (i.e., SIAS), $r = .46$, $p < .001$.

Behavioral Coding

   A behavioral coding scheme was developed to describe the quality of reactions

people displayed in response to their partner sharing a positive event. Coding was

circumscribed to the person who was listening, not the partner sharing their good news.

All coders received prototype descriptions of the four types of partner responses:

- Active-Constructive – Partner displays enthusiastic support for the event they are

  told about. He/she reacts in a positive manner and actively seeks additional

information or absorbs information about the event (e.g., non-verbal cues of savoring or satisfaction). They can voice enthusiasm through inflection in their voice or the content of their comments. Their enthusiasm may also be apparent in their gestures and non-verbal behavior, such as in Duchene or genuine smiles, laughter, giddiness, or intimate forms of touch. The partner may show genuine interest by asking questions about the event or actively exploring and searching for more information. This can be accomplished through statements that prolong the conversation and encourage the person to elaborate on their event. Key Element: enthusiasm and elaboration.

- Passive-Constructive – The partner responds positively but does not actively contribute to the conversation or attempt to explore the topic in any depth. His/her behavior is primarily passive with subtle signs of support and approval. He/she might show approval or support by engaging in intimate touch, nodding in approval, making eye contact or smiling. He/she may make a perfunctory, positive comment on the event but does not actively explore the story being shared by asking questions. The partner seems attentive and interested in the event but may either remain quiet, or voice approval with simple phrases that do not intend to prolong the conversation. Key Element: quiet but attentive and/or interested.

- Active-Destructive **-** The partner undermines the positive nature of the event by pointing out potential problems or downsides related to the event. He/she may minimize the event through questions or statements. Partner may also point out

how the positive event might adversely affect them. Partner may also show disappointment through non-verbal behavior, such as displaying negative emotions through facial expressions that show disgust, disapproval, etc. He/she may also roll their eyes, nod in disapproval, or make negative behavioral gestures intended to mock or undermine the event. The inflection and non-verbal behavior do not have to be intense. The content of their statements and tone of their non-verbal expressions, posture, and other behaviors might be clear, calm, and direct in their negativity. Key Element: undermining or denying positive nature of event.

- Passive-Destructive – Partner tends to ignore or fails to respond to the event. His/her behavior primarily reflects disinterest or inattentiveness. The partner may look away or be occupied with other objects (cell phone, etc). He/she may change the subject, simply remain quiet, or redirect the focus of the conversation to them. The partner might briefly acknowledge the event with short phrases but they appear disinterested in the response. These phrases are not intended to prolong the conversation. Instead, they appear to subtly bring the conversation to an early end. Key Element: lack of interest / self-focus.

After watching an interaction at least two times, coders selected the category that best represented a person's dominant response style throughout the interaction. They then rated the participants on each of the four categories using a 6-point scale for how well each category captured their behavior, ranging from 0 (*absolutely no match*) to 5 (*very good match*). To increase independent ratings, coders only focused on one of the partners in each couple (never both). Inter-rater reliability was acceptable as determined by

intraclass correlations (ICC) with absolute agreement of .89 for the active-constructive

dimension ($M = 1.64$, $SD = 1.3$), .63 for the passive–constructive dimension ($M = 1.27$,

$SD = 1.23$), .80 for the active–destructive dimension ($M = .85$, $SD = 1.2$), and .73 for the

passive–destructive dimension ($M = .83$, $SD = 1.1$). All videos were double-coded by

independent raters and their scores were aggregated to create four dimensions of

capitalization responses for subsequent analyses. The observed differences between ICC

estimates (e.g., passive-constructive dimension compared to active-constructive

dimension) probably reflect the greater difficulty in assessing one response style relative

to the other. To create an overall measure of observer-rated capitalization with higher

scores reflecting greater capitalization support, a composite score was created by

subtracting the passive and destructive categories from the active-constructive category.

This measure significantly correlated with participant's self-rated provision of support

following the interaction ($r = .21$, $p = .001$), as well as ratings of receipt of support from

one's partner ($r = .28$, $p < .001$).

Data Analysis

Estimating Misperceptions of Responsiveness

Given the problems associated with use of difference scores to measure accuracy

and bias (Edwards, 1994), misperceptions of self and partner responsiveness were

measured using a regression residual technique (Bonanno et al., 2002; John & Robins,

1994). Specifically, residual scores were created by regressing participants' perceptions

of responsiveness onto observers' ratings and retaining the standardized residuals of

participants' ratings. The retained residuals represent the variance in participants'

perceived responsiveness after the variance predicted by observer ratings has been removed. Thus, residual scores reflect over- and underestimation of perceived responsiveness compared to observer ratings (i.e., reality benchmark). This method also controls for scaling differences between participant and observer ratings of support. Two measures of misperception were created. Self-misperception was calculated by regressing participants' perceptions of self-responsiveness onto observer ratings of those participants' responsiveness. Partner misperception was similarly calculated by regressing participants' perceptions of partner responsiveness onto observer ratings of those participants' responsiveness.

Preliminary Analyses

Descriptive statistics were calculated to screen the data for out-of-range values, plausible means and standard deviations, and normal distributions. Some skewness and kurtosis was present for all scales although scales were distributed in theoretically-expected directions. Among all scales, skewness ranged from -.81 to 1.13 and kurtosis ranged from -1.01 to .90. Given these values were within acceptable ranges (skewness < 2 and kurtosis between -3 to 3) (Kline, 2005) and given the cost of interpretation associated with restructuring the data under such circumstances may outweigh the benefits (Tabachnik & Fidel, 2000), it was decided to keep the data in their untransformed state.

Missing data analyses were conducted to examine whether participants with partial versus complete data differed from each other in measurable ways. Correlations were obtained to examine the relationships between study variables. Trait social anxiety,

state anxiety, perceptions of responsiveness, observer ratings of responsiveness, and

relationship outcomes were examined as continuous variables in analyses. With an

interest in main and interaction effects, predictors and outcome variables were

standardized prior to testing the hypotheses to increase interpretability (Campbell &

Kashy, 2002).

Analysis of Dyadic Data

   Model Building and Specification. To account for the non-independence of

each person's data, hypotheses were tested using Actor-Partner Interdependence Models

(APIM; Kenny, Kashy, & Cook, 2006). APIM analyses control for the effects of one

partner's characteristics when examining the effects of the other partner's characteristics.

In APIM, two effects are estimated—actor and partner effects. Actor effects refer to the

within-person effect of how an individual's characteristics contribute to his or her own

outcomes. The partner effect refers to the between-person effect of how a partner's

characteristics contribute to an individual's outcomes. The APIM approach is a

conservative test because a given predictor (e.g., trait social or state anxiety) can only

reach statistical significance if it accounts for unique variance beyond the other predictors

in the model (e.g., partner's trait social or state anxiety). In order to simultaneously test

the study hypotheses while accounting for the interdependence of romantic partners, a

path model was created and tested using Structural Equation Modeling (SEM) with

AMOS 18 (Arbuckle, 2009). SEM is an appropriate method for examining the APIM

because it allows for the adjustment of dependencies that are associated with dyadic data.

In addition, SEM features the ability to compare whether effects within or between

partners have more influence on outcome variables. Standard SEM assumptions include multivariate normality, minimum sample size requirements, and identification procedures (see Kline, 2005).

All couples in this sample are heterosexual couples and were distinguished on the basis of gender. To test actor and partner effects within the same model, men and women were treated as nested within the dyad. To answer the first research question asking whether anxiety interferes with accurate perceptions of self and partner responsiveness, actor effects were estimated between participants' trait and state social anxiety and their interaction term to measures of self and partner misperception. Similarly, partner effects were estimated between one partner's measures of anxiety and the other partner's self and partner misperception. The second research question asks whether biased perceptions of self and partner responsiveness contribute to relational outcomes. Thus, paths were estimated between partner misperception and relationship satisfaction and commitment for both partners. Consistent with the Rusbult's investment model of relationship commitment and stability (Rusbult et al., 1998), relationship satisfaction was estimated to predict relationship commitment.
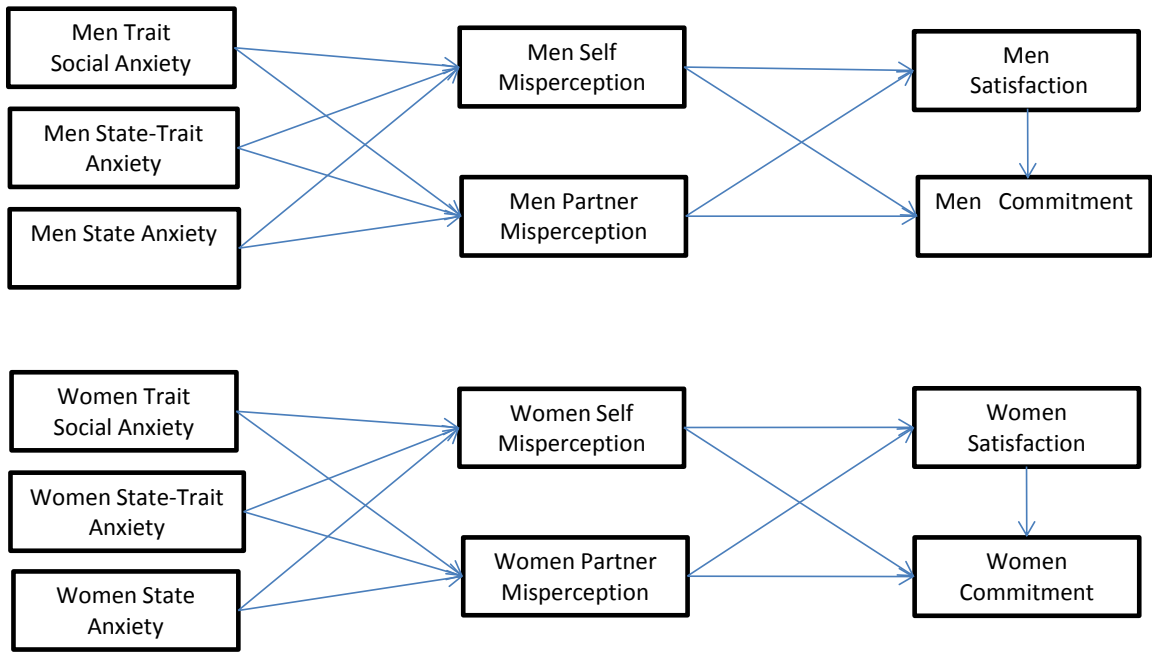
Figure 1: Model Testing Research Questions 1 and 2 Depicting Actor Effects
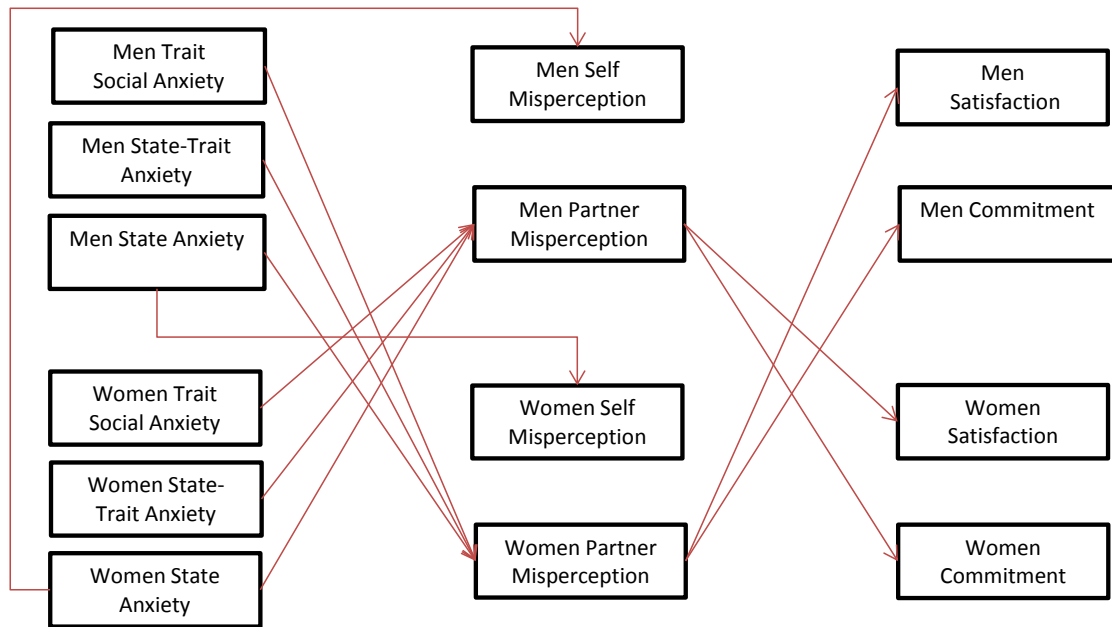
Figure 2: Model Testing Research Questions 1 and 2 Depicting Partner Effects

Although not shown, correlations were specified among all exogenous predictors. Within each gender, the error terms for self and partner misperception were allowed to covary. To control for nonindependence, the error terms between men and women's misperception ratings and relationship outcomes were allowed to covary. This allowed actor effects to be estimated while controlling for partner effects and vice versa. The current study did not propose any mediational effects between trait or state social anxiety and relational outcomes through self and partner misperception. Thus a priori, trait and state social anxiety and their interaction term were correlated with the error terms of the endogenous relationship outcomes (i.e., satisfaction, commitment). Relationship length was added as covariate in the model and correlated with trait social anxiety scores.

Analytic Approach. The first step of analysis was to verify the model's goodness of fit. The model was evaluated with the χ^2 test, which is a measure of exact fit, with nonsignificant values indicating no discrepancies between the model-reproduced covariance matrix and the sample covariance matrix. Also evaluated were the goodness-of-fit index (GFI; Joreskog & Sorbom, 1987), the Tucker-Lewis-index (TLI; Tucker & Lewis, 1973), the comparative-fit-index (CFI; Bentler, 1990), and the root-mean-square-error-of-approximation (RMSEA; Browne & Cudeck, 1993). A chi-square/degree of freedom ratio below about 3.0 is believed to indicate acceptable model fit (Kline, 2005). Values for GFI, TLI, and CFI above .90 are considered acceptable fit (Tabachnik & Fidell, 1996). Values of RMSEA less than .05 indicate a good-fitting model, and values larger than .10 indicate a poor-fitting model. RMSEA is also accompanied by a *p*-value; nonsignificant values imply close fit (Browne & Cudek, 1993).

The second step of analysis was to test the model estimates. Path coefficients are reported in standardized and unstandardized coefficients, with the degree of significance reported as a *p* value. Consistent with procedures outlined by Aiken and West (1991), significant interaction effects were probed by examining conditional values at high (> 1 SD) versus low (< 1 SD) levels of the moderating variable.

RESULTS

Preliminary Analyses

Descriptive Statistics

Means, standard deviations, and alpha coefficients for all study measures prior to

multiple imputation and standardization are reported below. Zero-order correlations

among study variables are also presented.

Table 1: Means, Standard Deviations, and Internal Consistency Coefficients for Study Variables

	Full Sample			Men		Women	
	M	*SD*	α	*M*	*SD*	*M*	*SD*
Anxiety							
SIAS	17.55	11.52	.92	15.76	10.58	19.34	12.17
State anxiety	2.04	1.12	.83	1.94	1.05	2.14	1.19
Self-reported responsiveness							
Self-responsiveness	6.08	.77	.91	6.05	.80	6.11	.75
Partner-responsiveness	5.79	.93	.93	5.75	.86	5.83	.99
Observer-rated responsiveness	.66	1.74	N/A	.64	1.79	.68	1.70
Relationship Quality							
Satisfaction	7.67	1.37	.90	7.65	1.43	7.71	1.32
Commitment	7.82	1.36	.83	7.68	1.48	7.97	1.22

Note. SIAS = Social Interaction Anxiety Scale; State anxiety = Anxiety during the interaction task. Self-responsiveness = Post-interaction self-responsiveness to partner event, measured by either self-report or observer ratings; Partner responsiveness = Post-interaction partner responsiveness to partner event, measured by either self-report or observer ratings.

Table 2: Zero-order Correlations among Study Variables

	1	2	3	4	5	6	7
1. SIAS	-						
2. State anxiety	.46***	-					
3. Self-responsiveness	-.09	-.23***	-				
4. Partner responsiveness	-.10	-.25***	.75***	-			
5. Observer-rated responsiveness	-.08	-.14*	.21***	.12	-		
6. Satisfaction	-.05	-.05	.26***	.35***	.14*	-	
7. Commitment	-.02	-.05	.20***	.32***	.04	.64***	-

Note. * $p < .05$. ** $p < .01$. *** $p < .001$. SIAS = Social Interaction Anxiety Scale; State anxiety = Anxiety during the interaction task. Self-responsiveness = Post-interaction self-responsiveness to partner-event, measured by either self-report or observer ratings; Partner responsiveness = Post-interaction partner responsiveness to partner-event, measured by either self-report or observer ratings.

Participants' average social anxiety scores ($M = 17.55$; $SD = 11.52$) were similar

to other large non-clinical samples (Heimberg et al., 1992; Mattick & Clarke, 1998);

participants at 1.5 standard deviations above the mean in this sample had scores that

approximate the cut-off for reliability differentiating people with and without diagnoses

of social anxiety disorder (≥ 34.0; Brown et al., 1997). Using this score to reflect

analogue social anxiety disorder, 19.9% of couples ($n = 28$) had at least one person who

scored in the clinical range with 24.8% of participants ($n = 32$) falling in the clinical

range. The women in this sample had higher overall levels of social anxiety compared to

men, $t(280) = -2.64$, $p = .009$. No gender differences were found on the remaining

measures.

Missing Data Analyses

Missing data across the study measures were as follows: social anxiety (0%), state

anxiety (0%), self- and partner-responsiveness (2.9%), observer ratings of responsiveness

(17.4%), and relationship satisfaction, investment, and commitment (.4%). The higher

level of missing data on observer ratings of responsiveness was due to the failure of a

given participant to share a positive event during the interaction task. Analyses were run

to examine whether participants with partial versus complete data differed from each

other in measurable ways. Dummy codes were used to code for missing observations and

t-tests were run to test mean differences between cases with missing vs. partial data. No

mean differences were found on any of the variables of interest. Moreover, missing data

could not be attributed to gender, length of the relationship, or depressive symptoms.

Using AMOS, multiple imputation was used to statistically estimate values for

incomplete data prior to running the path models described below. This approach is

thought to be superior to listwise deletion and regression (Acock, 2005).

Path Analysis

The path model which simultaneously tested research questions one and two

showed good fit to the data, χ^2 (47) = 64.03, p = .05; *GFI* = .95; *TLI* = .95; *CFI* = .98; and

RMSEA = 0.05, CI of .002 - .08, p = .46. Guided by modification indices and theoretical

rationale, paths were estimated between women's trait social anxiety and men's

commitment as well as between women's interaction of trait social and state anxiety and

men's relationship satisfaction. Nonsignificant paths were trimmed from the model

sequentially with the exception of those comprising the interaction effects. These

modifications yielded the model below which was a very good fit to the data, χ^2 (58) =

54.96, p = .59; *GFI* = .95; *TLI* = 1.01; *CFI* = 1.00; and *RMSEA* = 0.00, CI of .00 - .05, p =
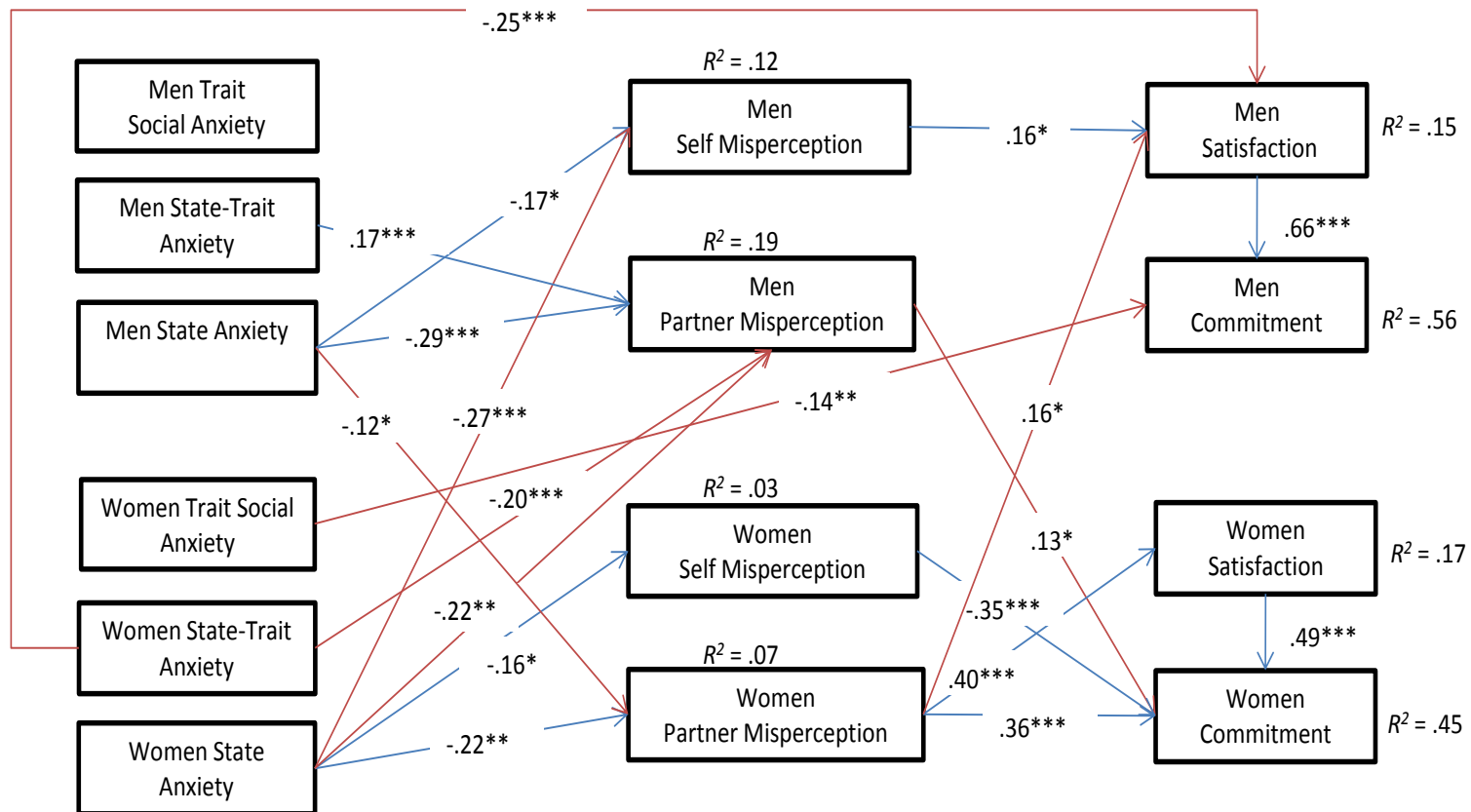
.96.

Figure 3: Final Path Model

Note. Blue lines reflect actor effects. Red lines reflect partner effects. Values are standardized path coefficients.

Given the zero-order correlations showed no association between trait or state social anxiety and relationship satisfaction and commitment (*p*s > .05), the current study did not propose any mediational effects between trait and state social anxiety and relational outcomes through self or partner misperception. However, a model examining these effects was tested. The fit of this model was worse than the original model fit (although not significantly). In addition, beyond the suggested modification of estimating a path between women's trait social anxiety and men's commitment, no other significant effects were found on measures of trait social anxiety and relationship satisfaction and commitment (*p*s > .05) while accounting for the other variables in the model. Thus, the trimmed model with suggested modifications was retained. For ease of interpretation, path model results are presented below in the context of each research question.

Table 3: Path model coefficients (N = 141 dyads)

APIM parameters	β	*B*	*SE*
Research Question 1			
Actor effects			
1. M state anxiety → M self-misperception	-.17*	-.18	.08
2. M state anxiety → M partner misperception	-.29***	-.28	.08
3. M state-trait interaction → M partner misperception	.17**	.13	.05
4. W state anxiety → W self-misperception	-.16*	-.16	.08
5. W state anxiety → W partner misperception	-.22**	-.23	.09
Partner effects			
6. M state anxiety → W partner misperception	-.12*	-.12	.06
7. W state-trait interaction → M partner misperception	-.20*	-.19	.05
8. W state anxiety → M self-misperception	-.27**	-.29	.09
9. W state anxiety → M partner misperception	-.22**	-.19	.05
10. W trait social anxiety → M partner misperception	.06	.06	.06

Research Question 2

Actor effects

	β	B	SE
11. M self-misperception → M satisfaction	.16*	.16	.07
12. W self-misperception → W commitment	-.35***	-.37	.09
13. W partner misperception → W satisfaction	.40***	.38	.07
14. W partner misperception → W commitment	.36***	.34	.09

Partner effects

15. M partner misperception → W commitment	.13*	.13	.06
16. W partner misperception → M satisfaction	.16*	.15	.08

Other Model Parameters

17. M trait social anxiety → M partner misperception	.04	.04	.06
18. W state-trait interaction → M satisfaction	-.25***	-.25	.07
19. W state anxiety → M satisfaction	-.01	-.01	.09
20. W trait social anxiety → M satisfaction	.01	.01	.08
21. W trait social anxiety → M commitment	-.14**	-.14	.05
22. M satisfaction → M commitment	.66***	.67	.05
23. W satisfaction → W commitment	.49***	.49	.06

Covariates

24. Relationship length → M satisfaction	.08	.08	.08
25. Relationship length → M commitment	.26***	.26	.06
26. Relationship length → W satisfaction	.08	.10	.08
27. Relationship length → W commitment	.25***	.24	.06

Note. Both unstandardized (β) and standardized (B) path coefficients are reported. M =

Male; W = Women; Trait social anxiety = Social Interaction Anxiety Scale; State anxiety

= Anxiety during the interaction task; Self misperception = misperceptions of support

provided to one's partner; Partner misperception = misperceptions of support received

from one's partner. * $p < .05$. ** $p < .01$. *** $p < .001$.

Research Question 1

The first research question tested whether trait and state social anxiety predicted

biased perceptions of responsiveness following positive event disclosures. It was

expected that high trait social and state anxiety would lead people to underestimate the supportiveness they provide and receive during positive event disclosures. Moreover, people who were more anxious were hypothesized to be evaluated by partners as less responsive compared to observer ratings.

Actor Effects. Trait social anxiety was not a significant predictor of self or partner misperception for either men or women. However, state anxiety during the interaction did predict self and partner misperception. For men, higher state anxiety led to an underestimation of self (β = -.18, *p* < .05) and partner (β = -.28, *p* < .001) responsiveness relative to observers' ratings. Similarly, women with greater state anxiety underestimated their own level of responsiveness (β = -.16, *p* = .05) as well as their partner's level of responsiveness (β = -.23, *p* < .01) relative to observers' ratings. A significant trait social anxiety x state anxiety interaction on partner misperception was found for men, β = .17, *p* < .001. When men's trait social anxiety was high, state anxiety appeared to have a minimal effect on misperceptions of their partner's responsiveness. At low levels of trait social anxiety, men experiencing greater state anxiety during the interaction appeared more likely to underestimate their partner's responsiveness. Upon examining simple slopes at conditional values of +1 and -1 SD from the mean, neither simple slope was significant.
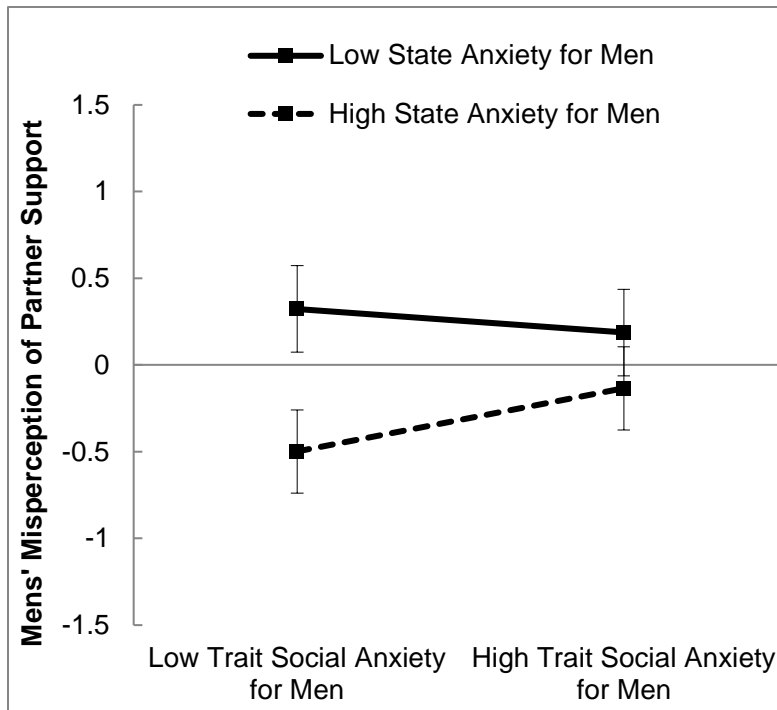
Figure 4: Interaction of Men's Trait and State Social Anxiety on Men's Misperceptions of Partner Support

Partner Effects. Partner trait social anxiety was not a significant predictor of self or partner misperception for either men or women. In contrast, partner state anxiety during the interaction predicted biased perceptions of responsiveness. Women showed a greater tendency to underestimate their partner's responsiveness when their partner experienced high state anxiety during the interaction ($\beta = -.12$, $p < .05$). Men were more likely to underestimate both their own ($\beta = -.27$, $p < .001$) and their partner's responsiveness ($\beta = -.22$, $p < .01$) when their partner experienced higher state anxiety during the interaction. A significant trait social anxiety x state anxiety interaction on men's perceptions of their partner was found, $\beta = -.20$, $p < .001$. Graphical representation of this interaction shows that men were more likely to make underestimate their partner's support when their partner experienced high trait social anxiety as well as high state

anxiety during the interaction. In contrast, women with high trait social anxiety who experienced low state anxiety during the interaction were perceived by partners as being more supportive compared to observer ratings. Upon examining simple slopes at conditional values of +1 and -1 SD from the mean, neither simple slope was significant.
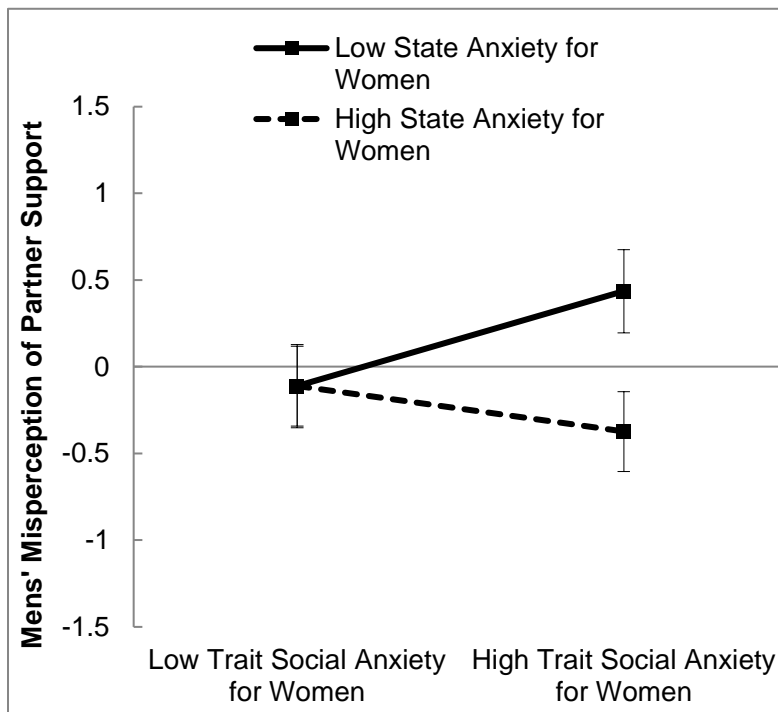
Figure 5: Interaction of Women's Trait and State Social Anxiety on Men's Misperceptions of Partner Support

Research Question 2

The second research question asks whether misperceptions of partner responsiveness contribute to relational outcomes. It was expected that underestimating the support provided to or received from one's partner would be associated with poorer relationship outcomes. In contrast, people who overestimated their partner's

responsiveness or self-responsiveness to their partner's event would experience greater relational benefits.

Actor Effects. For women, a tendency to overestimate a partner's responsiveness to their positive event disclosure was associated with greater relationship satisfaction (β = .40, p < .001) and commitment (β = .36, p < .001). Biased perceptions of self-responsiveness also predicted relationship outcomes. Specifically, men who overestimated the support they provided to their partners reported greater relationship satisfaction (β = .16, p < .05). In contrast, women who underestimated their responsiveness to their partner's shared event reported greater commitment (β = -.35, p < .001).

Partner Effects. When women overestimated their partner's responsiveness, their partners reported greater satisfaction in the relationship (β = .16, p = .05). When men overestimated their partner's responsiveness, their partners reported greater commitment (β = .13, p < .05). A significant relationship was also found between women's trait social anxiety and men's commitment. Specifically, men with partners with high trait social anxiety reported lower relationship commitment (β = -.14, p < .01). There was also a significant interaction effect of women's trait and state anxiety on men's relationship satisfaction. As shown in Figure 4, relationship commitment was highest for men when their partners experienced low state and trait anxiety as well as when partners experienced higher state anxiety in the context of high trait social anxiety. An examination of the simple slopes showed that slopes at conditional values of +1 and -1 SD from the mean were not significant.
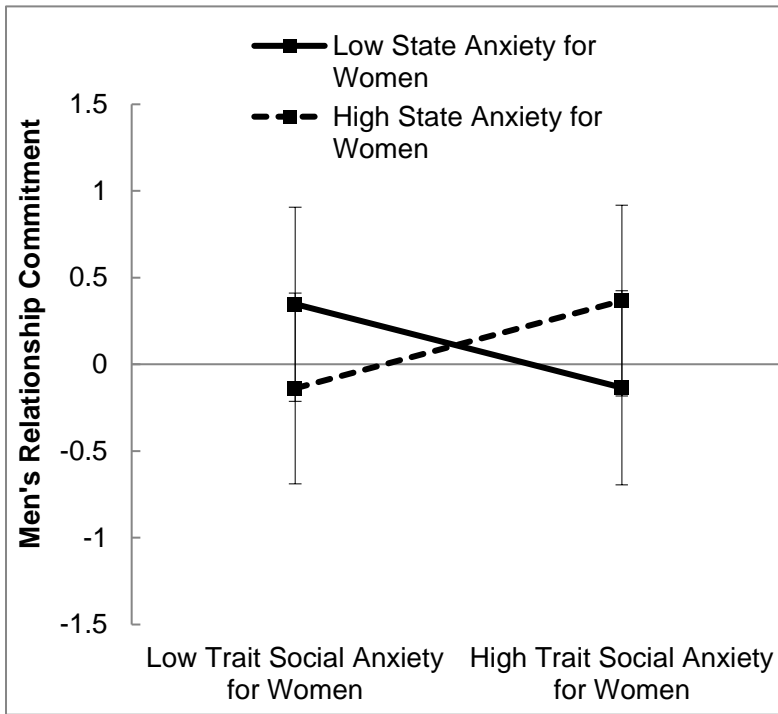
38

Figure 6: Interaction of Women's Trait and State Social Anxiety on Men's Relationship Commitment

DISCUSSION

Social anxiety may hinder the benefits of capitalization support, thus threatening the quality of established romantic relationships. People who are socially anxious are more likely than their less anxious peers to misinterpret social information and be less responsive to positive social cues (e.g., Clark & Wells, 1995; Hofmann, 2007; Kashdan et al., 2011). These deficits appear to contribute to the interpersonal problems associated with this condition (Alden & Taylor, 2004). Yet, the accuracy with which socially anxious people perceive themselves and their romantic partners in positive social contexts has not been explored. In addition, only a few attempts have been made to understand how socially anxious people influence, and are influenced by, romantic partners and how both partners within a couple contribute to relationship functioning (for exceptions see Beck et al., 2006; Filsinger & Wilson, 1983; Kashdan et al., in press; Wenzel et al., 2005). The present research addresses these limitations by examining how the presence of social anxiety within a couple influences perceptions of support and relational outcomes.

Contrary to study hypotheses, the present study found no association between trait social anxiety and misperceptions of support during capitalization attempts (when controlling for effects of state anxiety). In contrast, greater state anxiety during a laboratory interaction predicted misperceptions of responsiveness. Men and women

experiencing high state anxiety when sharing good news with their romantic partner showed a greater tendency to underestimate the support they provided to and received from their partners. In addition, people experiencing greater state anxiety were more likely to be inaccurately perceived by their partners who viewed them as less responsive compared to observer ratings. Moreover, men who interacted with partners experiencing high state anxiety showed a tendency to underestimate the support they provided to their partners.

These findings suggest that trait social anxiety alone was not enough to contribute to misperceptions of support in the context of romantic relationships. Socially anxious people may feel more comfortable during interactions with close romantic partners. Therefore, they may not experience the elevated state anxiety and interpretative biases that are activated in social situations perceived as evaluative (Clark, 2005). However, for a subset of people, sharing good news with one's romantic partner in the laboratory may have been perceived as a more threatening or evaluative task, thereby eliciting greater self-presentation concerns and anxious reactions during the interaction. Given the knowledge that the interaction was videotaped and would be reviewed at a later time by others, the experimental task itself may have elicited anxiety for some people. It is also possible that some socially anxious people felt less comfortable engaging in positive event disclosures, thereby creating an anxiety-provoking context. Finally, perceptions of oneself and/or one's partner as overly supportive or unsupportive during the interaction may have produced a heightened sense of threat related to abandonment or performance expectation concerns.

The present findings showing associations between high state anxiety and misperceptions of support are consistent with theory and prior research (see Clark & Wells, 1995; Heimberg et al., 2010; Hofmann, 2007) linking anxiety during social situations to an increase in self-focus and the deployment of safety behaviors, both of which hinder accurate assessments of self and others. The current findings are congruent with research showing that anxious adults who experience greater distress during interactions with romantic partners tend to evaluate their partner's ambiguous behavior as hurtful (Collins & Feeney, 2004). In addition, the significant partner effects highlight the importance of obtaining information from both partners in a couple as it shows how one partner's distress can interfere with another partner's self-perceptions. While socially anxious people have been found to be less likely to reciprocate self-disclosures with interaction partners they were not familiar with (Meleshko & Alden, 1993), we did not find this to be the case in the context of interacting with one's relationship partner.

In prior work, the provision and receipt of capitalization support has been shown to strengthen existing relationships (Gable et al., 2004, 2006; Reis et al., 2010). If a person makes skewed perceptions of partner responsiveness during capitalization attempts, this could influence the degree to which a person shares positive life events with their partner in the future. For instance, underestimating a partner along the active-constructive dimension while overestimating how passive and destructive they are might contribute to less frequent disclosure of personal information. By reducing opportunities to provide support, this could amplify perceptions of one's partner as being unresponsive.

Over time, this may lead to poorer relationship quality and a greater likelihood that the relationship will dissolve (Gable et al., 2004, 2006; Reis et al., 2010).

Supporting prior research, the current findings show that underestimations of partner support predicted poorer relationship quality whereas overestimating a partner's responsiveness was associated with greater relational benefits. Women who underestimated the support received from their partners reported lower levels of relationship satisfaction and commitment and their partners also reported lower satisfaction. Similarly, women were less committed to the relationship when men underestimated the support provided by their partner. Misperceptions of the support provided to one's partner was also associated with relationship functioning. Specifically, men who perceived themselves as less supportive were less satisfied in their relationships while perceptions of the self as more supportive was associated with greater satisfaction. These results are consistent with work showing that engaging in supportive acts contributes to positive emotions and well-being (Lyubomirsky, Sheldon, & Schkade, 2005) for both parties involved (Schwartz, Meisenhelder, Ma, & Reed, 2003; Weinstein & Ryan, 2010).

An unexpected finding also emerged. Women reported greater relationship commitment when they perceived themselves as less responsive to their partner's shared event. One possible explanation for this finding is that women who are more focused on their partner's shared event may lose access to self-relevant information about their own responsiveness, leading them to underreport how supportive they were of their partners. This greater connection during the shared event (albeit at the expense of accuracy of the

self) may have contributed to more positive relational outcomes (i.e., higher commitment).

Together, the current findings suggest that assessing the presence of social state anxiety is imperative to understanding how social anxiety impacts romantic relationships. While socially anxious people may be more vulnerable to interpretative biases in many social situations, simply assessing trait levels of social anxiety may not capture the nuances of how these individuals experience self-evaluative concerns and biased thinking in a romantic context. The presence of state anxiety appears to be more relevant to understanding the presence of misinterpretations of social behavior when interacting with romantic partners. These present findings also highlight the possibility that some people with elevated levels of trait social anxiety may feel less threatened and more comfortable interacting with their partners when in an established relationship. In the absence of evaluative concerns that trigger state anxiety, socially anxious people may interpret social information more accurately.

Clinical Relevance

Therapists working with couples in which one or both partners suffer from social anxiety may find the results of this study useful. Prior work has found socially anxious people to be deficient in the support they provide to their partners (Kashdan et al., in press). Based on the present findings, socially anxious people (while deficient in support behaviors) appear to accurately perceive themselves when they are not feeling anxiety during interactions with romantic partners. In contrast, the presence of social state anxiety during romantic interactions is related to negatively skewed perceptions of the support

provided and received. Thus, therapeutic efforts can be devoted to both enhancing

behavioral responsiveness during positive social contexts as well as to improving

accuracy of perceptions when providing support.

Therapists can work with couples to identify opportunities for capitalization

support and help partners in interpreting these social exchanges accurately. Therapists

can begin by providing psychoeducation on how social anxiety contributes to inaccurate

assessments of self and others in social situations. Specifically, therapists can education

clients on how self-presentation concerns elicit anxiety which manifests as cognitive,

emotional, physiological, and behavioral changes during an interaction. For instance,

worries about being judged negatively (cognitive) is associated with feelings of fear

(emotion), physical reactivity such as sweating or blushing (physiological), and greater

safety behaviors such as decreased eye contact (behavioral). Together, these components

of anxiety narrow one's attentional focus which limits the data available to accurately

process social information. For socially anxious people, this inward attention may be

thought to serve a protective role in shielding evaluation. However, it is

counterproductive to the goals of the interaction and possibly increases the likelihood that

the feared outcome (rejection, evaluation) may occur (Clark & Wells, 2005).

After therapists have worked with clients to identify the cognitive, emotional,

physiological, and behavioral changes that occur leading up to, during, and following

interactions with romantic partners, several intervention strategies can be employed.

When clients become aware of the maladaptive cognitions fueling their anxiety reactions,

therapists can engage them in cognitive restructuring work around these anxious thoughts

(Beck & Emery, 1985). Role plays and behavioral exposures can be used to help clients

habituate to their anxiety reactions, practice social engagement without reliance on safety

behaviors, and work to broaden their focus to external stimuli (Hope, Heimberg, & Turk,

2010). The utilization of audio or video feedback can be useful in helping clients to

evaluate their performance and modify distorted self-perceptions (Rapee & Hayman,

1996). Skills such as relaxation (Manzoni, Pagnini, Castelnuovo, & Molinari, 2008) and

training to allocate attention to positive stimuli (Taylor, Bomyea, & Nader, 2011) can

also be taught to enhance greater present moment awareness and accuracy of perceptions.

Additionally, the romantic partners of anxious clients can learn to provide capitalization

opportunities where they can serve as a benchmark for reality and provide feedback on

their partner's supportiveness. For clients who are socially anxious but do not experience

elevations in state anxiety when interacting with romantic partners, therapists can work to

identify how these individuals can generalize their social skills with their romantic

partner to other contexts.

Strengths and Limitations

There were several strengths to the present study. First, the large number of

couples in the study (N=141) reduced the likelihood of spurious findings. Second,

information was collected from both partners in a couple as well as an outside observer.

This allowed for the perspectives of both members of the couple to be assessed in order

to discern for whom, and under what conditions, inaccuracies in perception occur in the

context of romantic relationships; information that cannot adequately be obtained through

a single informant. The use of the APIM approach applied a conservative test to the study

hypotheses as a given predictor can only reach statistical significance if it accounts for unique variance beyond the other predictors in the model. This approach also allowed for the test of gender differences in the model. This was especially relevant as prior research has found gender difference in anxiety, disclosure of personal information, and the appreciation of intangible support (e.g., Turk et al., 1998). In this study, gender played a role in determining misperceptions of support and in determining how misperceptions contribute to relational outcomes. Furthermore, the use of three methodologies to measure capitalization support (self-, partner-, and observer ratings) increase confidence in findings showing that greater anxiety when sharing good news with one's partner contributes to misperceptions of support. Third, in contrast to retrospective reports of support behavior, assessments of self and partner support were obtained immediately following the interaction task. This did not allow much opportunity for the interaction to degrade from memory or for more anxious individuals to ruminate over the event, thereby limiting the likelihood that perceptions of support would be modified over time. This is especially relevant given socially anxious people have been found to reconsider and reconstruct biased interpretations of social situations into their memories for an event (Brozovich & Heimberg, 2008). Fourth, most research examining the effects of social anxiety on biased interpretations of social events have only measured social anxiety at the trait level and simply assumed that a socially anxious person is also experiencing anxiety during the interaction. This approach does not take into consideration the level of comfort that a socially anxious person may feel with their interaction partner. By assessing both

trait and state social anxiety, it was possible to explore the differential effects of trait and state social anxiety on relationship processes with romantic partners.

Several study caveats should also be considered. First, two different measures were used to capture capitalization support across participants and observational coders. Despite this difference, both measures demonstrated validity as evidenced by similar correlations with trait and state social anxiety and relationship satisfaction. Second, the cross-sectional nature of the current investigation does not allow for determination of causality. Thus, future work might extend these findings by using longitudinal assessments. Third, some readers might be concerned about the generalizability of the findings given the use of a student sample selected for varying levels of social anxiety. While the sample showed acceptable racial, ethnic, and age diversity with variables durations of relationship, findings might not generalize to longer-term relationships and clinical samples. Notably, however, 24.8% of couples had a member who scored in the clinical range of social anxiety (Brown et al., 1997) and the average relationship length was 22.3 months.

While the present study focused on existing romantic relationships, future work is needed to understand how misperceptions associated with trait social and/or state anxiety influence the initiation or failure to initiate romantic relationships as well as other close relationships. Future work can also address the benefits of conducting interventions to enhance accuracy and whether incorporating one's romantic partner into these interventions contributes to, or hinders, the process.

Conclusions and Future Directions

In summary, the present study shows that state social anxiety (and not trait social anxiety) is associated with inaccurate perceptions of support behaviors among romantic partners and that misperceptions of support (both positively and negatively skewed) are related to relationship quality. By examining reports from both partners in a couple and obtaining observer ratings, it was possible to test the conditions that contribute to inaccurate perceptions within the relationship context and the subsequent impact of these perceptions on relationship functioning. The results showed that elevated state anxiety during romantic interactions contributed to underestimations of support. These underestimations of support led to relational costs including lower levels relationship satisfaction and commitment. Taken together, this work can inform researchers and clinicians about the relevance of state anxiety, and not just trait social anxiety, when interacting with close others contributes to skewed perceptions of reality and relational consequences.

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BIOGRAPHY

Panagiota Ferssizidis graduated from Sikeston High School, Sikeston, Missouri, in 1999. She received her Bachelor of Arts in Psychology from Truman State University in 2003 and her Master of Arts in General Psychology from New York University in 2005. She has held various clinical and research employment positions with the Washington, DC Veterans Affairs Medical Center, Research Triangle Institute, New York University Child Study Center, and Manhattan Psychiatric Center. Mrs. Ferssizidis continued her graduate coursework at George Mason University, receiving her Master of Arts in Clinical Psychology in 2009. She received a Doctor of Philosophy degree in Clinical Psychology from George Mason University in 2013. She has published eight refereed papers in journals and co-authored a book chapter. Many of the papers she presented at major international conferences.