

On the Relationship Among Social Anxiety, Intimacy, Sexual Communication, and Sexual Satisfaction in Young Couples

Jennifer L. Montesi · Bradley T. Conner ·
Elizabeth A. Gordon · Robert L. Fauber ·
Kevin H. Kim · Richard G. Heimberg

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Abstract This study was conducted to better understand why socially anxious individuals experience less sexual satisfaction in their intimate partnerships than nonanxious individuals, a relationship that has been well documented in previous research. Effective communication between partners is an important predictor of relationship satisfaction. Sexual communication, an important aspect of communication between romantic partners, is especially sensitive for couples given the vulnerability inherent in being open about sexual issues. Because socially anxious individuals characteristically report fear of evaluation or scrutiny by others, we hypothesized that the process of building intimacy by sharing personal information about oneself with one's partner, including when this information relates to one's sexuality and/or the sexual domain of the relationship, would be particularly difficult for socially anxious individuals. The present study examined fear of intimacy and sexual communication as potential mediators of the relationship between higher social anxiety and lower sexual satisfaction. Self-report data were collected from 115 undergraduate students and their partners in monogamous, heterosexual, committed relationships of at least 3 months duration. Multilevel path modeling revealed that higher social anxiety predicted higher fear of intimacy, which predicted lower satisfaction with open sexual communication, which, in turn, predicted lower sexual satisfaction. Additionally, there was evidence of mediation as there were significant indirect effects of the antecedent variables on sexual satisfaction. The path model

had excellent fit. Implications for social anxiety, intimate relationships, and couples therapy are discussed.

Keywords Social anxiety · Intimacy · Self-disclosure · Sexuality

Introduction

Social anxiety is a prevalent condition that is expressed on a continuum of severity, the high end of which is defined as social anxiety disorder (SAD) (Heimberg, Brozovich, & Rapee, 2010). SAD is often characterized by the experience of distress in or by the avoidance of social situations in which evaluation by others is perceived to be likely. Many individuals with moderate to extreme levels of social anxiety (including SAD) form romantic relationships with others (Beck, Davila, Farrow, & Grant, 2006). However, they report lower satisfaction with various aspects of these relationships, including lower levels of social and emotional intimacy with their partners (Schneier et al., 1994), less emotional expression and self-disclosure, and lower overall relationship quality than non-anxious individuals (Sparrevoorn & Rapee, 2009). Individuals with higher social anxiety, including those with SAD, also report less sexual satisfaction than non-anxious individuals (e.g., Bodinger et al., 2002; Kashdan et al., 2011).

The present study adds to the literature (e.g., Beck, Davila, Farrow, & Grant, 2006; Davila & Beck, 2002; Gordon, Heimberg, Montesi, & Fauber, 2010) investigating the intimate relationships of individuals with social anxiety by examining mediators of the relation between social anxiety and relationship satisfaction. The sexual aspects of intimate relationships have been shown to be an important factor in determining the overall quality of relationships (e.g., Christopher & Sprecher, 2000), and, in this study, we focused on identifying variables that explain the

J. L. Montesi · B. T. Conner · E. A. Gordon ·
R. L. Fauber · R. G. Heimberg (✉)
Department of Psychology, Temple University, Weiss Hall,
1701 North Thirteenth St., Philadelphia, PA 19122-6085, USA
e-mail: heimberg@temple.edu

K. H. Kim
Department of Psychology in Education, University of Pittsburgh
School of Education, Pittsburgh, PA, USA

well-documented finding that socially anxious individuals experience less sexual satisfaction in their intimate partnerships than nonanxious individuals (e.g., Bodinger et al., 2002). To our knowledge, ours is the first study to incorporate data from both partners of each couple and test a statistical model of sexual satisfaction among individuals varying in degree of social anxiety. We examined fear of intimacy and an individual's satisfaction with his or her ability to communicate openly about sex with his or her partner as mediators of this relationship.

Fear of Intimacy

Reis and Shaver's (1988) interpersonal process model of intimacy holds that the development of intimacy begins when an individual shares personally revealing information or feelings with another. The open expression of thoughts and feelings generally leads to greater social support (Kennedy-Moore & Watson, 2001; Sparrevojn & Rapee, 2009) and satisfaction (e.g., Carrere & Gottman, 1999; Gottman & Levenson 1988; Meeks, Hendrick, & Hendrick, 1998) in close relationships. Intimacy is also associated with sexual satisfaction (Haning et al., 2007), whereas a lack of intimacy is linked to sexual dysfunction (e.g., McCabe, 1997; Stuart, Hammond, & Pett, 1987) and a lack of sexual activity between partners (Donnelly, 1997). A theoretical model proposed by Fish, Fish, and Sprenkle (1984) posits that individuals use the sexual relationship to regulate distance from their partners, particularly when they fear having too much intimacy or closeness in the relationship.

Individuals with high social anxiety might fear and feel compelled to limit the development of intimacy in their relationships for a number of self-protective and relationship-protective reasons. Highly socially anxious individuals tend to fear rejection (Davila & Beck, 2002). In particular, rejection by an intimate partner is a salient fear for individuals with high social anxiety and/or SAD, since feelings of closeness to a partner can serve as an indicator of one's social inclusion and acceptance (Leary, 2001). Individuals with high social anxiety and SAD avoid self-disclosure (e.g., Meleshko & Alden, 1993; Sparrevojn & Rapee, 2009) and have difficulty expressing personal beliefs, intentions and preferences to their intimate partners for fear of being rejected or abandoned (Kashdan, Volkman, Breen, & Han, 2007; Keltner & Haidt, 1999; Keltner & Kring, 1998). Socially anxious individuals also tend to avoid expressing emotion, believing that doing so is a sign of weakness (e.g., Erwin, Heimberg, Schnier, & Liebowitz, 2003; Spokas, Luterek, & Heimberg, 2009).

Suppressing or inhibiting open sharing of thoughts and feelings can have negative consequences for relationships. Butler et al. (2003) demonstrated that suppression of both negative and positive emotions during interactions with others both reduces rapport and inhibits the formation of closer relationships. Because the building of intimacy is a reciprocal and interactive process (Berg & Derlega, 1987; Laurenceau, Barrett, & Pietromonaco, 1998; Reis & Shaver, 1988), withholding one's emotional

responses to avoid a difficult or troubling topic or guard one's private thoughts may thwart the maintenance and development of intimacy (Butler et al., 2003). Furthermore, limiting one's emotional expression to one's intimate partner may gradually degrade the quality of the relationship.

Whereas a number of studies have documented an association between withholding one's emotional responses and reduced relationship satisfaction for both partners (Gottman & Levenson, 1988; Levenson, 1994), other findings (e.g., Cuming & Rapee, 2010; Kashdan et al., 2007) suggest that the relationship between emotional expression and relationship quality is complex. In a study of relatively young couples (M age = 24.79 years), Kashdan et al. (2007) demonstrated that suppressing one's emotions had a detrimental effect on the intimate relationships of individuals lower in social anxiety, but that it enhanced relationship closeness for individuals higher in social anxiety. In a community sample of relatively established couples (M age = 34 years; 49% living together for at least 1 year, 55% married), social anxiety was associated with lower self-disclosure and negative emotional expression for women in both intimate partnerships and close friendships, but not for men (Cuming & Rapee, 2010). For women in this study, lower self-disclosure mediated the relationship between higher social anxiety and lower satisfaction in intimate relationships. These findings speak to the importance of considering the nuanced and unique dynamics inherent in the relationships among emotional expression, intimacy, and overall relationship satisfaction for socially anxious individuals.

More broadly, however, the positive intimacy-enhancing function of self-disclosure remains an important point of investigation, as the tendency of socially anxious individuals to avoid expressing thoughts and feelings has been repeatedly shown to negatively impact their intimate relationships in important ways (e.g., Sparrevojn & Rapee, 2009; Spokas et al., 2009). Given the tendency to withhold sharing thoughts and feelings, it is not surprising that individuals with SAD in intimate relationships report feeling neglected by, lonely and distanced from, and not heard or understood by an intimate partner (Wenzel, 2002).

Sexual Communication

MacNeil and Byers (2005) have argued that communication about sexuality is elemental to the "development and maintenance of satisfying sexual relationships." The building of intimacy through open, honest communication about sexual matters, perhaps to an even greater degree than communication about other issues, requires a willingness to be vulnerable. Better sexual communication is associated with greater sexual (e.g., Byers & Demmons, 1999; Sprecher, 2006) and overall satisfaction (e.g., Banmen & Vogel, 1985) in close relationships. In what MacNeil and Byers (1997, 2005) have called the "expressive pathway," increased sexual satisfaction is achieved through the increased intimacy and closeness with one's partner that comes from sharing or

communicating about sexually intimate or private information. In another model, the “instrumental pathway,” MacNeil and Byers proposed that talking about sexual matters, such as one’s sexual preferences with one’s partner, makes it more likely that an individual will directly benefit from open sexual communication in ways that he or she finds sexually satisfying. Both the expressive and instrumental pathways, in addition to other models outside the scope of the current study, posit that open communication about sex with one’s partner, albeit an undertaking that requires individuals to risk rejection, humiliation, or other discomfort, nevertheless carries with it the possibility of great reward.

Very little research has examined the sexual communication of socially anxious individuals. However, individuals with high social anxiety display more negative communication behaviors (i.e., communication that is unhelpful or that disrupts attempts to resolve a problem) than individuals with low social anxiety during discussion of relationship problems (Wenzel, Graff-Dolezal, Macho, & Brendle, 2005). If individuals high in social anxiety use more negative communication behaviors when discussing emotionally charged or risky topics (e.g., relationship problems) with their partners, they may have similar problems discussing other “high-risk” topics, such as sex. This could lead individuals with higher social anxiety to avoid such discussions (either preemptively or based on past failed attempts). Alternatively, these individuals may enter discussions about sexuality with low expectations of their ability to communicate about this topic, despite a desire to do so. Such beliefs may lead to a self-fulfilling cycle in which an individual’s low self-efficacy (Hope, Heimberg, & Turk, 2010) fosters avoidance of the topic and subsequent dissatisfaction with sexual communication.

Sexual Satisfaction

Intimacy, by way of self-disclosure and open communication of thoughts and feelings between partners, is also related to the quality of the sexual relationship (e.g., Schenk, Pfrang, & Rausche, 1983). Couples who experience communication difficulties often experience sexual problems as well (e.g., Fay, 1977; Zimmer, 1983). Longitudinal evidence indicates that, when couples improve their communication, their sexual satisfaction also increases (Litzinger & Gordon, 2005). Chesney, Blackeney, Cole, and Chan (1981) found that couples’ sexual satisfaction and both general and sexual communication improved following a sexual dysfunction treatment program, suggesting that communication and sexual functioning are unique, yet interrelated constructs. Consequently, the fear of intimacy and the avoidance of open communication and emotional expression between partners for fear of negative evaluation are likely to have significant consequences in terms of both overall relationship satisfaction and sexual satisfaction specifically.

Hypotheses

Given previous findings, we expected to find interrelationships among social anxiety, sexual satisfaction, fear of intimacy, and satisfaction with open or transparent communication about sex with one’s partner. A particular purpose of this study was to test a specific mediational model in which the relationship between social anxiety and sexual satisfaction is mediated by both fear of intimacy and satisfaction with open sexual communication with one’s partner. We proposed that individuals higher in social anxiety would report increased fear of intimacy and that this would lead to lower satisfaction with their ability to communicate openly about sex with their partners and, in turn, to lower satisfaction with the sexual aspects of their relationships. Because self-disclosure (e.g., Altman & Taylor, 1973) and sexual communication between partners (Wheless, Wheless, & Baus, 1984) may differ across developmental stages of intimate relationships, and given the high correlation between overall relationship satisfaction and sexual satisfaction (e.g., Christopher & Sprecher, 2000), we statistically controlled for relationship length and overall relationship satisfaction in our analyses.

Method

Participants

Participants were 115 undergraduate students and their partners in monogamous, heterosexual, committed intimate partnerships of at least three months’ duration. There were no exclusion criteria related to social anxiety or any other variables other than those noted above. In two couples, one partner was unwilling or unable to participate in the study; in these cases, the sole student member of the couple was included in the analyses. Additionally, in 11 couples, both the student participant and the partner failed to respond to a sufficient number of items to render their data valid. These 22 individuals were dropped from the final sample (22 of 230, 9.57%). These adjustments resulted in a final sample of 206 (rather than 230) individuals. Individuals with missing data did not differ significantly from those retained in the final sample on gender, age, self-reported sexual orientation, relationship duration, relationship status (e.g., dating, married, living together), ethnicity, or any of the variables examined in the present study.

Of the initial 115 student participants (i.e., those who initially signed up to participate for course credit), 79.3% were female and 20.7% were male. The final total sample of 206 (104 students plus 102 participating partners) was 50% female and 50% male. The mean age of participants and their partners was 22.4 years ($SD = 5.89$). The majority (93%) of individuals and their partners self-identified as exclusively heterosexual; the remainder identified themselves either as heterosexual with some homosexual expe-

rience (6%) or as bisexual (1%). Additionally, 38.2% of couples had been together for over 2 years. Of the remaining couples, 26.3% had been together for 1–2 years, and 35.5% had been together for less than 1 year. The majority of couples were dating but not married or living together (78%), although some couples were cohabitating (11%) or married (11%). The ethnic makeup of the final sample included individuals who self-identified as Caucasian (68%), African or African American (14%), Asian or Asian American (8%), Hispanic or Latino (5%), Biracial (4%), and Other (1%).

Measures

The *Social Interaction Anxiety Scale* (SIAS) (Mattick & Clarke, 1998) was used to assess social anxiety. A 20-item self-report scale, the SIAS was designed to measure anxiety about interactions in dyads or groups. Participants were asked to rate various statements assessing anxiety in social situations (e.g., “I worry about expressing myself in case I appear awkward”) on a 5-point Likert-type scale ranging from 0 (*Not at all characteristic of me*) to 4 (*Extremely characteristic of me*). Total scores on the SIAS range from 0 to 80. The SIAS has been shown to have excellent psychometric properties (Mattick & Clarke, 1998) and reliably differentiates individuals with and without SAD (e.g., Brown et al., 1997). The SIAS has demonstrated high internal consistency ($\alpha s = .88-.93$) and high test–retest reliability after one and three-month intervals (Brown et al., 1997; Heimberg, Mueller, Holt, Hope, & Liebowitz, 1992; Mattick & Clarke, 1998). Alpha in the present study was .94.

The *Fear-of-Intimacy Scale* (FIS) (Descutner & Thelen, 1991) was used to assess fear of intimacy or the degree to which anxiety inhibits an individual’s capacity to exchange thoughts and feelings of personal significance with a significant other. The 35-item FIS is based on the idea that communicating personal information about which one feels strongly to a highly valued other is necessary for the development of intimacy. The first 30 items pertain to an individual’s *current* intimate partnership and the remaining 5 items pertain to his or her *past* intimate relationships. Responses were rated on a 5-point Likert-type scale ranging from 1 (*not at all characteristic of me*) to 5 (*extremely characteristic of me*). Fifteen of the FIS items were negatively worded (e.g., “I am not afraid to share with my partner what I dislike about myself”), and these items were reverse-scored and summed along with the remaining individual item responses (e.g., “I feel uneasy talking with my partner about something that has hurt me deeply”) to arrive at a final score. The FIS has a theoretical score range of 35–175, with higher scores reflecting greater fear of intimacy.

In a sample of 460 introductory psychology students, the mean score was 78.75 ($SD = 21.82$), and differences between scores of men and woman were not significant. The instrument demonstrated excellent internal consistency and stability, with an α of .93 and one-month test–retest correlations of .89 (De-

scutner & Thelen, 1991). Alpha in the present study was .94. The FIS has good construct validity as demonstrated by its positive correlations with the *UCLA Loneliness Scale* and negative correlations with the *Jourard Self-Disclosure Questionnaire* and the *Miller Social Intimacy Scale* (Descutner & Thelen, 1991).

The *Sexual Communication Satisfaction Inventory* (SCSI) (Wheless et al., 1984) was used to assess individuals’ satisfaction with their ability to communicate openly with their partners about the sexual aspects of the relationship. A 22-item self-report instrument, the SCSI was designed to tap satisfaction concerning communication about sexual behavior with one’s intimate partner (e.g., “I am pleased with the manner in which my partner and I communicate with each other after sex”) and also asks questions regarding openness and transparency of sexual communication between partners (e.g., “I would not hesitate to show my partner what is a sexual turn-on for me”). Responses were rated on a Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Items are worded both positively and negatively to offset the potential for response set bias. A number of scoring methods are appropriate for use with the SCSI, and there is not one standard scoring formula. After making the appropriate scoring reversals, total scores in the present study were computed a scoring formula created by the authors of the *Index of Sexual Satisfaction* (ISS) (Hudson, Harrison, & Crosscup, 1981; see next section) for use with that measure.¹ Provided an individual completes at least 80% of items, total scores obtained using the scoring formula above are valid despite missing values or omitted items (Hudson et al., 1981). Total scores range from 0 to 100, with higher scores reflecting higher *dissatisfaction* with sexual communication. Wheless et al. (1984) reported that this instrument was empirically unidimensional, and validity was inferred from positive associations between sexual communication satisfaction and relational satisfaction in studies of both sexually intimate college students ($r = .68$; Baus, 1987) and married individuals ($r = .50$; Cupach & Comstock, 1990). Alpha in the present study was .94.

The ISS (Hudson et al., 1981) was used to assess individuals’ satisfaction with the current sexual relationship. Despite its title, the ISS was designed to measure the degree of sexual *dissatisfaction* in dyadic relationships. A 25-item self-report inventory, item responses were elicited on a Likert-type scale ranging from 1 (*rarely or none of the time*) to 7 (*all of the time*). Items were worded both positively (e.g., “Sex is fun for my partner and me”) and negatively (e.g., “Sex with my partner has become a chore for me”) to offset the potential for a response set bias. After making the appropriate scoring reversals, an individual’s total score was computed using the scoring formula mentioned in Footnote 1. The resulting final scores ranged from 0 to 100, with higher

¹ $(\sum X_i - N)(100)/[(K - 1)N]$. In this formula, X is an item response, i is the item, K is the number of response categories, and N is the number of properly completed items.

scores reflecting higher sexual dissatisfaction. Internal consistency has been demonstrated by Hudson et al. (1981; $\alpha = .91$) and replicated by others (e.g., Purnine & Carey, 1997; $\alpha = .89$). Alpha in the present study was .92. The ISS is reliable over a 1-week interval ($r = .93$), and total scores on the ISS have been shown to discriminate between couples with and without sexual problems (Hudson et al., 1981). The ISS has shown consistent associations with measures of marital satisfaction ($r_s = .66-.68$) (Cupach & Comstock, 1990; Hudson et al., 1981).

The *Dyadic Adjustment Scale* (DAS) (Spanier, 1976, 1989) was used to assess the quality of individuals' romantic relationships. Fifteen of the 32 items focus on partner agreement on topics such as demonstrations of affection, aims, goals, and things believed important; 15 items focus on the frequency of behaviors in the relationship, such as confiding in one's mate and arguments; the final two items measure the partner's overall degree of happiness with and commitment to the relationship. The DAS has a theoretical score range from 0 to 151, with higher scores reflecting greater satisfaction and 98 being the normative cutoff for distress. The DAS is a widely used instrument with well-established reliability and validity as a measure of relationship satisfaction and was intended for use with married individuals or partners in similar dyads. Internal consistency in the present study, as demonstrated by Cronbach's α , was .91. As has been the case in previous studies of couples who are not necessarily married (e.g., Hendrick, 1988), the word "spouse" was changed to "partner" to render the scale more suitable for dating couples.

Procedure

Participants were recruited from undergraduate psychology courses and were invited to participate in a larger IRB-approved study of communication and sexuality in intimate relationships. To meet inclusion criteria, individuals had to be in committed, heterosexual, monogamous intimate partnerships of at least 3 months duration. Social anxiety is assumed to vary normally across the population and was examined as a continuous variable in the present study; no participants were excluded on the basis of social anxiety. Additionally, participants were only included if they acknowledged that their partner was also willing to participate in the study. Participants created password-protected usernames on the university's online research data collection website and were given instructions on how to sign up and complete the study. Informed consent was obtained and participants completed a series of questionnaires examining communication, sexuality, relationship satisfaction, and other constructs of interest. After participants completed the questionnaires, they were instructed to have their partners complete a similar battery of questionnaires online. The importance of having the partner complete the questionnaires independently was stressed to participants, and both participants and partners were assured that neither would be able to access the couples' responses once submitted.

Statistical Analyses

The EQS structural equation modeling program (Bentler, 2011) was used to estimate a two-level path model using a partial maximum likelihood approach (Bentler, 2011; Muthén, 1994). Because participants were nested within couples, observations are not independent. When this is the case, standard structural equation modeling methods are not applicable. Special adjustments are needed to compute standard errors and goodness-of-fit χ^2 -tests (Muthén & Satorra, 1995). This can be accomplished by modeling two levels, the individual and the couple, and by adjusting for the nonindependence of these observations in the analyses. The level one, or within-couple, portion of the multilevel path model was of particular interest in assessing the impact of the independent variables on the outcomes. The level two portion of the model was not of interest as it was a saturated model controlling for the dependent nature of those data. As such, the results of the level two model are not presented here.

In the current study, a predictive path model was tested to assess the influence of social anxiety on sexual satisfaction. It was hypothesized that (1) individuals higher in social anxiety would report higher fear of intimacy, (2) higher fear of intimacy would be predictive of lower sexual satisfaction, and (3) individuals who reported lower satisfaction with their ability to communicate about sex openly with their partners would be likely to report greater sexual dissatisfaction. Goodness of model fit was evaluated with the maximum likelihood χ^2 statistic, the comparative fit index (CFI; Bentler, 1990), and the root-mean-square error of approximation (RMSEA; Hu & Bentler, 1999). A non-significant χ^2 indicates that the hypothesized model does not significantly deviate from the model present in the data. The CFI, which ranges from 0 to 1, indexes the improvement in fit of the hypothesized model over a model of no relationship among the variables after adjusting for sample size (Hu & Bentler, 1999). Values equal to or greater than .95 suggest excellent fit, indicating that approximately 95% of the covariation in the data is reproduced by the hypothesized model. The RMSEA is a measure of lack of fit per degrees of freedom, controlling for sample size (Ullman & Bentler, 2003). Values less than .06 indicate excellent model fit.

Results

Table 1 presents the means and standard deviations of the variables in the analysis at the within-subjects level for the full sample of participants and their partners, as well as the correlations among the variables in the within-subjects level analysis. Figure 1 presents the final model in the multilevel within-subjects level analysis. The path model had excellent fit: $\chi^2(16, N = 206) = 3.85, p = .80$, CFI = .99, RMSEA = .052 (90% confidence interval = .00–.18). Social anxiety predicted fear of intimacy ($p < .001$), which, in turn, predicted dissatisfaction with ability to communicate openly

Table 1 Zero order correlations, means, and SDs of all variables

Variable	1	2	3	4	5	6	<i>M</i>	<i>SD</i>
1. Social anxiety							18.56	11.97
2. Fear of intimacy	.33**						65.82	18.71
3. Sexual communication satisfaction	.23**	.45**					20.45	16.11
4. Sexual satisfaction	.27**	.37**	.72**				16.50	11.89
5. Overall relationship satisfaction	-.27**	-.49**	-.46**	-.46**			122.24	15.94
6. Relationship length	-.04	-.14	.03	.14	-.12			
7. Gender (0 = male)	.15*	-.11	.02	.07	-.03	-.01		

Note. $N=206$ (includes participants and partners). Social anxiety = SIAS; fear of intimacy = FIS; sexual communication satisfaction = SCS, indicates dissatisfaction with sexual communication; sexual satisfaction = ISS, indicates sexual dissatisfaction; overall relationship satisfaction = DAS, indicates satisfaction with the relationship; relationship length = based on category scheme (1 = 3 months, 2 = 4–6 months, 3 = 7–9 months, 4 = 10–12 months, 5 = 13–15 months, 6 = 16–18 months, 7 = 19–21 months, 8 = 22–24 months, 9 = over 24 months)

* $p < .05$ (2-tailed); ** $p < .01$ (2-tailed)

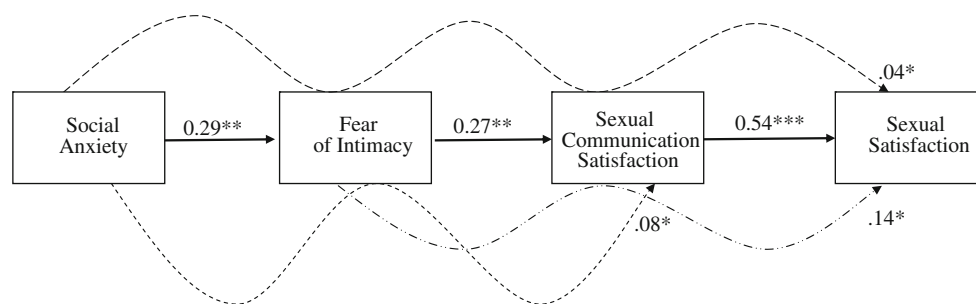


Fig. 1 Higher social anxiety significantly predicted higher fear of intimacy, and higher fear of intimacy significantly predicted lower satisfaction with sexual communication, which, in turn, significantly predicted lower sexual satisfaction. Boxes represent measured items. Statistics are from the level 1 model. Level two data are not depicted in the figure. Linear solid lines

between variables present standardized regression coefficients. Dotted curved lines present standardized parameter indirect effects. The model had excellent fit: $\chi^2(16, N = 206) = 3.85, p = .80, CFI = .99, RMSEA = .052$ (90% confidence interval = .00–.18). * $p < .05$, ** $p < .001$, *** $p < .001$

about sex ($p < .01$). Finally, dissatisfaction with ability to communicate openly about sex predicted sexual dissatisfaction ($p < .01$).

Additionally, results of an effects decomposition analysis as part of the multilevel path model indicated that there were significant indirect effects at the within-subjects level. Fear of intimacy indirectly predicted sexual dissatisfaction through dissatisfaction with open sexual communication ($p < .01$). Furthermore, social anxiety indirectly predicted dissatisfaction with open sexual communication through fear of intimacy ($p < .01$). Finally, social anxiety indirectly predicted sexual dissatisfaction through fear of intimacy and dissatisfaction with open sexual communication ($p < .01$).

Results of a second multilevel path model that included length of relationship and DAS total score as independent variables predicting fear of intimacy and sexual satisfaction indicated that length of relationship did not significantly predict fear of intimacy nor were there any indirect effects of length of relationship on the distal outcomes. Overall relationship satisfaction, however, was significantly negatively correlated with social anxiety ($p < .01$), negatively predicted fear of intimacy ($p < .01$), and predicted lower sexual satisfaction ($p < .001$). Although this model

had good fit, $\chi^2(8, N = 206) = 11.40, p = .18, CFI = .98, RMSEA = .063$ (90% confidence interval = .00–.14), fit of the initial model did not improve with the inclusion of these variables in the model. Thus, the results of the initial model are depicted in the figure.

Discussion

Previous research (e.g., Bodinger et al., 2002; Sparrevoth & Rapee, 2009) has demonstrated that, in comparison to non-anxious individuals, socially anxious individuals report lower satisfaction with various aspects of their relationships, including lower sexual satisfaction. The aim of this study was to build on prior work in this area to better understand the mechanisms underlying the relationship between social anxiety and sexual dissatisfaction by examining partners' fear of intimacy and satisfaction with their ability to communicate openly about the sexual aspects of their relationship. In our study, individuals who reported higher social anxiety also reported higher fear of intimacy, lower satisfaction with open sexual communication, and lower sexual satisfaction. Broadly, these results were consistent with evidence that

being able to openly communicate with one's partner is important for the development of intimacy (e.g., Descutner & Thelen, 1991; Kashdan et al., 2007) and sexual satisfaction (e.g., Schenk et al., 1983) in partnerships.

Further, support was found for indirect effects of fear of intimacy and sexual communication dissatisfaction in explaining the relationship between social anxiety and sexual dissatisfaction. These findings expand on prior research by suggesting a mechanism by which individuals higher in social anxiety experience less sexual satisfaction. Socially anxious individuals characteristically fear negative evaluation, rejection or abandonment by their partners, and often demonstrate dependency in their close relationships (e.g., Davila & Beck, 2002). For these individuals, open communication of feelings is seen as a sign of weakness and often suppressed (Spokas et al., 2009). Furthermore, self-disclosure of personal beliefs, preferences, and emotions is often avoided for fear of being rejected or abandoned by an intimate partner (Gilbert, 2001; Keltner & Haidt, 1999; Keltner & Kring, 1998; Leary, 2001; Meleshko & Alden, 1993). As such, the risk of negative consequences to the relationship as a result of one's own sexual self-disclosure may seem insurmountable for socially anxious individuals. The desire to avoid rejection by one's partner and/or the breakup of the intimate partnership may outweigh the desire for feelings of increased closeness and intimacy that come from sharing personal information about one's self with one's partner; in other words, for socially anxious individuals, the fear of intimacy may lead to avoidance of self-disclosure about personally significant information such as one's own sexuality. Similarly, when this communication is attempted by individuals with social anxiety, the anticipation of failure based on past experience or the expectation of low-self efficacy characteristic of individuals with social anxiety (Hope et al., 2010) may indeed lead to negative outcomes, resulting in dissatisfaction with one's ability to communicate in an open way about intimate topics such as sex with one's partner.

Results of the current study were consistent with this explanation. We found that individuals higher in social anxiety not only fear intimacy with their partners—likely in large part due to the risk of potential negative consequences to the relationship—but also that this fear of intimacy is associated with greater dissatisfaction with their ability to communicate openly with their partners about sex. Additionally, participants in our study who endorsed feeling dissatisfied with their open sexual communication with their partner also reported dissatisfaction with the sexual relationship as a whole. Among other possibilities, this suggests that, for socially anxious individuals, taking a first step toward greater intimacy with their partners by openly sharing personal information might not be sufficient as a way to enhance sexual satisfaction; open sharing with one's partner about specifically sexual topics may be necessary for increased sexual satisfaction for these individuals. As such, it may be that therapeutic interventions for socially anxious individuals in intimate partnerships would do well to focus on increasing closeness between

partners through effective attempts at self-disclosure, perhaps through graduated exposure to feared topics of communication, with sexual or other particularly intimate or private topics being at the top of the hierarchy (depending on the experience of the individual). Presumably, the benefits of successful self-disclosure experiences between partners would be twofold, resulting in: (1) greater mastery over, decreased anxiety related to, and/or enhanced ability to tolerate feared situations, and (2) enhanced relationship satisfaction, sexual satisfaction, and intimacy for the couple, as well as the related positive psychological correlates of increased happiness and fulfillment in an intimate relationship.

Low expectations about one's ability to build intimacy with another person through sexual communication could impact one's attempts at sexual communication as well as also one's sexual satisfaction. This is consistent with research demonstrating that one's expectations for an event can impact the outcome of the event (e.g., McNulty & Fisher, 2008). Research has indicated that more positive expectations enhance individuals' sexual satisfaction through the processes of behavioral and/or perceptual confirmation (e.g., Miller & Turnbull, 1986; Snyder, 1984). Whereas in the former, expectancies for an event can give rise to expectancy-consistent *behavior* in an event (Merton, 1948), the latter refers to the notion that expectations prior to an event can lead to *interpretations* of the event that are expectancy-consistent (Fiske & Taylor, 1991). It may be the case that low or negative expectations about one's ability to communicate about sex with one's partner impact socially anxious individuals' self-reported sexual satisfaction through behavioral confirmation, perceptual confirmation, or some combination of the two. In the future, it will be important to consider the possibility that socially anxious individuals' negative expectancies may be impacting the overall quality of their intimate relationships as well as their self-reported sexual satisfaction by way of behavioral and/or perceptual confirmation.

Limitations and Future Directions

There were several limitations to the present study. Although our recruited participants were college students and their partners, almost 40% of couples in our sample had been together for at least 2 years. Furthermore, all couples in our sample endorsed being sexually active with their partners in committed, monogamous relationships. Nevertheless, the generalizability of these findings to more long-term, committed relationships is unclear and will require further examination in those samples. Furthermore, given that the current sample was educated, fairly low in both social anxiety and fear of intimacy, and high in satisfaction with their sexual and overall relationships, it will be important to determine whether the present findings hold in less educated and more distressed populations. It is possible that relationships among the variables in the model examined differ for individuals who are lower versus higher in social anxiety and/or relational distress.

This study examined social anxiety, fear of intimacy, satisfaction with one's ability to communicate openly about sex with one's partner, and sexual satisfaction of individuals at a single time point. Although the results indicate that fear of intimacy and satisfaction with open sexual communication both played a role in determining the sexual satisfaction of socially anxious individuals, it is impossible to say whether these relationships were correlational or whether the proposed model represents causal effects over time. To eliminate alternative interpretations and draw stronger conclusions about the sexual satisfaction of socially anxious individuals, it will be necessary to use a longitudinal design. A longitudinal design will also allow an examination of the mechanisms by which fear of intimacy and open sexual communication contribute to enhanced/decreased sexual satisfaction for couples and individuals across the spectrum of social anxiety.

Future research is needed to examine whether social anxiety, fear of intimacy, and open sexual communication interact in a similar manner to determine the overall (i.e., not specifically sexual) relationship satisfaction of socially anxious individuals. Research on sexual self-disclosure in relation to socially anxious individuals' fear of intimacy and both sexual and overall relationship satisfaction is necessary, both to better understand the intimate relationships of socially anxious individuals, and also to design therapeutic interventions to aid in their enhancement.

Furthermore, a goal of the present study was to examine the construct of social anxiety and its relationship to the other variables in the proposed model. However, it is possible and in some cases likely that social anxiety overlaps with other constructs relevant to the relationships in question (e.g., attachment anxiety and avoidance, fear of rejection, or personality characteristics). In future work, it will be important to closely examine the impact of other variables of interest on the relationships comprising the current model.

An additional area for further investigation pertains to the finding of Kashdan et al. (2007) that, for individuals higher in social anxiety, suppressing negative emotional expression had positive consequences for the relationship. It may be the case that, for individuals higher in social anxiety, withholding or suppressing open communication about the sexual aspects of the relationship may be similarly adaptive in some ways (i.e., overall relationship promotion, closeness). In other words, for individuals higher in social anxiety, withholding feedback or other information pertinent to the sexual relationship might, in some cases, enhance the relationship overall, despite the fact that it also leads to lower satisfaction with the sexual relationship specifically. This is an important area that should be closely examined in the future, as it could potentially add to our growing understanding of the nuanced ways in which socially anxious individuals behave in and experience their intimate partnerships.

The DAS was used as to assess the quality of individuals' romantic relationships in this study. Although commonly used as a measure of relationship quality in dating couples (e.g., Holland

& Roisman, 2008; Riggs, Cusiman, & Benson, 2011), it is uncertain whether individuals in less-established partnerships would be as concerned about certain areas addressed in the measure (e.g., finances, relationships with in-laws). This should be further researched in future work.

Finally, because both the SCS and the ISS were satisfaction measures, it is possible that methodological artifact could account for their overlap. Despite this concern, the use of a satisfaction measure of sexual communication in the present study could also be considered a strength in that it allowed the assessment of a subjective aspect of individuals' experience of communicating with their intimate partners. Given socially anxious individuals' concerns about the *perceived* threat of negative evaluation or judgment by others, it may be that *satisfaction* with sexual communication is in fact a more relevant construct to measure when considering the interplay of subjective experience and satisfaction in intimate relationships. In future work, we would like to more directly assess the details of the various aspects of sexual communication in addition to individuals' subjective feelings about their experiences, either through the modification of existing measures (e.g., the *Sexual Self-Disclosure Scale*) (Snell, Belk, Papini, & Clark, 1989) or the creation of a new measure specifically designed for this purpose.

Similarly, given potential conceptual overlap between social anxiety and fear of intimacy (i.e., both could be seen as related to concerns about and fear of communicating with others), it is also possible that methodological artifact could explain a portion of the relationship between these variables. This is a relevant issue that should also be considered in future work in this area.

Strengths and Implications

The current study attempted to extend prior work on the intimate relationships of socially anxious individuals and was the first to use a path model to explain the relationship between social anxiety and sexual dissatisfaction. With few exceptions (e.g., MacNeil & Byers, 2005), most of the research on intimate partnerships has assessed only one member of each couple, ignoring the perspective of the other partner. We were able to obtain responses from both partners of participating couples and thus were able to create a more balanced description of particular aspects of participants' relationships. We found support for a double mediational pathway in which fear of intimacy and dissatisfaction with one's ability to communicate openly about sex with one's partner explain the sexual dissatisfaction reported by individuals higher in social anxiety. In light of the core features of social anxiety, it is not surprising that socially anxious individuals fear the types of interactions that are important in helping to establish and maintain the development of intimacy in intimate relationships. However, attempts to avoid the negative consequences of self-disclosure and emotional expression may ultimately work against the establishment of intimacy or closeness, which is related to overall relationship satisfaction (e.g., Meeks et al., 1998) and social support

(e.g., Kennedy-Moore & Watson, 2001). Although preliminary, our findings nevertheless suggest important directions of future study. It is possible that future research on intimacy and self-disclosure in the sexual domain will have important treatment implications for enhancing the intimate relationships of socially anxious individuals.

On a more general level, our results echo previous findings on the benefits of sexual self-disclosure to an intimate partner for all couples (e.g., Banmen & Vogel, 1985; Byers & Demmons, 1999; Sprecher, 2006), not just those characterized by higher levels of social anxiety. Along the lines of the model proposed by Fish et al. (1984) and consistent with the expressive pathway of MacNeil and Byers (1997, 2005), expressing one's private beliefs, feelings, and preferences, particularly with regard to the sexual domain, may decrease distance between partners, promoting intimacy and ultimately increasing sexual satisfaction in the relationship. The importance of expressing and experiencing emotion in the context of an intimate relationship is not new to the field of couple therapy. Sharing and working with emotions is a central theme in Emotionally Focused Couple Therapy (EFCT) (Johnson, 2004), which has been cited as the most "empirically validated approach to couple therapy, apart from the behavioral approaches" (Johnson, 2004, p. 8). In EFCT, decreasing the emotional distance experienced by a couple is one of the main targets in decreasing couple distress and enhancing partner interactions and satisfaction (Johnson, 2004). Similarly, Integrative Behavioral Couple Therapy (IBCT) (Christensen, Jacobson, & Babcock, 1995; Jacobson & Christensen, 1996) emphasizes increasing emotional acceptance between intimate partners as a way to promote enhanced intimacy and satisfaction in the relationship. An assumption of IBCT is that relationship distress is rooted in not only in problematic behaviors, but also in partners' emotional reactivity to these behaviors. Thus, in promoting acceptance and openness surrounding the emotional experiences of partners, IBCT attempts to "alter the emotional context" of the relationship (Christensen, Atkins, Baucom, & George, 2006).

It may also be the case that some individuals are sufficiently motivated by unmet or outstanding sexual needs and desires to attempt open sexual communication with their partners; in this way, consistent with the instrumental pathway (MacNeil & Byers, 1997, 2005), clarifying one's sexual needs and desires to one's partner makes it possible to achieve enhanced sexual satisfaction directly. Rooted in each of these models is the promise of a more satisfying sexual relationship with one's partner following open sexual sharing.

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