

SEXUAL COMMUNICATION ANXIETY, ATTACHMENT, RELATIONSHIP
SATISFACTION, AND SEXUAL SATISFACTION IN AUBURN
UNIVERSITY UNDERGRADUATES

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SEXUAL COMMUNICATION ANXIETY, ATTACHMENT, RELATIONSHIP
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UNIVERSITY UNDERGRADUATES

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Ashley Nicole Anders, daughter of Carl Anders and Andrea Anders, was born on November 11, 1983, in Jackson, Tennessee. She graduated fourth in her class from West Carroll High School in 2002. She attended the University of Tennessee at Chattanooga for four years and graduated magna cum laude in May 2006 with a Bachelor of Science degree in psychology. She then entered graduate school in August 2006 at Auburn University to pursue her Master of Science degree in Marriage and Family Therapy. She plans on pursuing her doctoral degree in Human Development and Family Studies upon the completion of the requirements for her master's degree.

THESIS ABSTRACT

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To date, sexual communication anxiety has not been investigated in a college undergraduate sample. The purpose of the present study is to examine the relationships among sexual communication anxiety, relationship satisfaction, sexual satisfaction, sexual communication, and attachment style in Auburn University undergraduates. Each of these constructs was assessed by self report measures and responses were entered into a structural equation model , where the data were tested.

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INTRODUCTION

The present study will add to the research on sexual communication anxiety as it relates to attachment style, relationship satisfaction, and sexual satisfaction. The relationships among attachment style, relationship satisfaction, and sexual satisfaction have been examined in numerous studies. The general finding is that these variables tend to have positive relationships among each other with high levels of one being associated with high levels in other variables.

Sexual communication anxiety on the other hand, which refers to a person's level of fear in discussing his/her sexual relationship with a significant other, is a construct that has not been studied in as much detail as the others. In fact, only one study currently exists (Davis, Shaver, Widaman, Vernon, Follette, and Bietz, 2006) that has examined this construct. In the Davis et al. (2006) article, sexual communication anxiety was found to have a negative relationship with all of the previously mentioned relationship variables. Since the research on sexual communication anxiety has only been conducted in one sample from one population, it is important that this construct be tested with other populations. Therefore, the present study will examine the relationships among sexual communication anxiety, attachment style, relationship satisfaction, and sexual satisfaction to see if the results from Davis et al. will be replicated in a sample of Auburn University undergraduates.

Review of Davis (2006) article

Inhibited sexual communication refers to communication about sex that goes largely unspoken from one partner to another (Davis, et al, 2006). Put another way, it is inhibited communication between partners about sexual needs. In the research on sexual and relationship satisfaction and the research about sexual communication, very few researchers have investigated the anxiety or fear that individuals may have about communicating about sex with their partners. Davis and colleagues (2006) examined the relationship between inhibited sexual communication, sexual satisfaction, and relationship satisfaction. The participants were 1,989 people (724 men, 1,221 women, and 44 sex unspecified) who responded to an internet survey. The sample was 78% Caucasian, 7% African American, 5% Hispanic, 10% other or unspecified. The mean age of the participants was 25.46, with a range of 15 to 75.

Attachment was measured with a 20- item subset of the Experiences in Close Relationships Scale (ECR: Brennan, Clark and Shaver, 1998). Relationship satisfaction was measured by two items on which the participants rated their overall satisfaction with

their relationships and how much they were in love with their partners. Sexual satisfaction was conceptualized as having three separate components, which were physical satisfaction, emotional satisfaction, and satisfaction with the amount of control the person felt they had over his/her sex life. In the study I am proposing, I will focus only on the measurement of the physical sexual satisfaction for the construct of sexual satisfaction. Because the population from which my sample will be drawn is undergraduate students who may or may not be in a long-term relationship, emotional sexual satisfaction and satisfaction with control over one's sex life may not be as important because these two constructs may be more likely to occur within the context of a long term relationship. Thus, these will be excluded in this semi-replication study. Physical sexual satisfaction was measured by a 10 item scale developed for this study that included statements such as "I am usually able to satisfy my sexual needs in my relationship" and "I would like to be able to get more physical satisfaction out of sex." Inhibited sexual communication was measured with the Inhibition of Need Expression Scale (INES; Davis, et al., 2006). Participants were asked to rate the degree to which they agree with statements such as "Generally, I tend to feel inhibited about talking about sex" and "if we are having problems with sex, I tend to let them build up for a long time before I say anything."

The results from this study indicated that inhibited sexual communication was negatively related with physical satisfaction with sex. Higher levels of inhibited sexual

communication were associated with lower levels of physical satisfaction. Inhibited sexual communication was also negatively associated with relationship satisfaction, with higher levels of inhibition being associated with lower levels of relationship satisfaction. Attachment anxiety was found to be negatively related to relationship satisfaction with high levels of anxiety being associated with lower levels of relationship satisfaction. This same pattern was found for attachment avoidance and relationship satisfaction as well. All of these results, however, were controlled for emotional satisfaction, and satisfaction with the amount of control the person felt they had over his/her sex life.

REVIEW OF LITERATURE

Relationship satisfaction and sexual satisfaction

Sexual satisfaction is often confused or used synonymously with frequency of intercourse and orgasm (Perlman & Abramson, 1982.) Lawrance and Byers (1995) developed a scientific definition for this construct in which they defined sexual satisfaction as “an affective response arising from one’s subjective evaluation of the positive and negative dimensions associated with one’s sexual relationship” (Lawrance & Byers, 1995, p. 268). Or simply, sexual satisfaction is the degree to which someone is satisfied or happy with his or her sexual relationship (Sprecher & Cate, 2004). For the purposes of this thesis, the same type of definition can also be applied to relationship satisfaction. It is the degree to which someone is satisfied or happy with his or her overall relationship. Numerous studies have shown that these two constructs are related (Byers, 2005; Sprecher, 2002; Yeh, Lorenz, Wickrama , Conger, and Elder,2006;). I will begin by examining the research concerning the relationship between these constructs.

Byers (2005) examined the relationship between sexual satisfaction and relationship satisfaction in a longitudinal study of 53 men and 90 women who were involved in romantic relationships. This study was guided by the Interpersonal Exchange Model of Sexual Satisfaction (IEMSS; Lawrance and Byers, 1992a) that proposes that

sexual satisfaction results when individuals perceive the level of sexual rewards in sexual relationships to outweigh sexual costs. Sexual rewards refer to sexual activities that a person finds rewarding and pleasurable. Sexual costs, on the other hand, refer to those activities that a person finds unrewarding or not pleasurable or that require a lot of physical or mental effort. The Global Measure of Relationship Satisfaction (GMRS; Lawrance and Byers, 1992b) and the Global Measure of Sexual Satisfaction (GMSS; Lawrance and Byers, 1992b) were used to measure relationship satisfaction and sexual satisfaction respectively. Participants also completed the Interpersonal Model of Sexual Satisfaction Questionnaire (IMSSQ; Lawrance and Byers, 1995).

Their results indicated that sexual satisfaction was higher for individuals with high relationship satisfaction, and vice versa. In addition, high levels of sexual rewards were significantly related to sexual satisfaction and high levels of sexual costs were related to low levels of sexual satisfaction. Sexual satisfaction was greater for individuals who perceived equal levels of high rewards for themselves and for their partners and vice versa.

A similar longitudinal study by was conducted by Sprecher (2002) in which data were collected in 1988, 1989, 1990, 1991, and 1992. One hundred-one couples participated in this study in which the relationship between sexual satisfaction and relationship satisfaction was investigated in dating relationships. The Global Measure of Sexual Satisfaction (Lawrance and Byers, 1992b) was used to measure sexual satisfaction and the Relationship Assessment Scale (RAS; Hendrick, 1988) was used to measure relationship satisfaction. Her results indicated that a significant positive relationship

existed between sexual satisfaction and relationships satisfaction over these 5 waves. There was also a significant positive relationship between sexual satisfaction and commitment and love across each wave. Additionally, over time, increases in sexual satisfaction were associated with increases in relationship satisfaction, love and commitment and vice versa.

The relationship between sexual satisfaction and marital quality was examined by Yeh, Lorenz, Wickrama, Conger, and Elder(2006). This study was different from other studies because it included 283 couples and was also conducted with an older sample. Most of the couples in the sample were in their thirties and forties. Sexual satisfaction was measured with eight items on a five point Likert scale with questions such as “my spouse and I have a wonderful sex life,” and “sex isn’t very important to me, ” (Conger & Wickrama, 1993). Marital quality was measured by using two global questions concerning how happy and how satisfied the couples were with their marriages (Fincham & Bradbury, 1987). This study also examined marital instability, which was measured by the five item short version of the Marital Instability Index (MII; Booth, et al., 1983). The data were collected in five waves in 1990, 1991, 1992, 1994, and 2001.

The researchers found that sexual satisfaction at one time point predicted marital satisfaction at the next time point for both women and men although marital quality at one point did not predict greater sexual satisfaction at the next time point. Higher levels of sexual satisfaction at one point in time were associated with lower levels of marital instability at the next time point. Furthermore the relationship between marital quality and marital instability was mediated by sexual satisfaction; at high levels of sexual

satisfaction, marital quality and marital instability had a stronger negative relationship than when sexual satisfaction was low. (This sounds like a moderation took place instead of a mediation, but the authors referred to it as mediation).

The findings from the research point to a positive relationship between relationship satisfaction and sexual satisfaction. That is, higher levels of relationship satisfaction are related to higher levels of sexual satisfaction and vice versa. I hypothesize that this will also be the case in my study; that is, after controlling for the other variables in the hypothesized model, relationship and sexual satisfaction will still be positively related.

Sexual communication anxiety.

The extant literature on sexual communication anxiety was reviewed in the Davis (2006) article above. Because of the paucity of research on sexual communication anxiety, I am also reviewing some of the literature about communication anxiety. Wheelless and Parsons (1994) conducted a study in which they measured the relationship between communication apprehension and sexual communication satisfaction. Communication anxiety refers to the degree to which a person feels anxiety in an oral communication situation (McCroskey, 1977). Sexual communication satisfaction refers to the degree to which a person is satisfied with the sexual communication within a relationship. The data were collected from a medium sized southeastern university. Participants were 110 volunteers from introductory level business and professional

communication course. Sixty-one men and 48 women comprised the sample and the mean age for the participants was 23 years.

Communication apprehension was measured with a 30 item scale that was developed specifically for this study, which included a 10 item scale developed by Wheelless (1975). Sexual communication satisfaction was measured with a 22 item scale that was developed specifically for this study. The results indicate that communication apprehension was negatively related to sexual communication satisfaction in both men and women. That is, high levels of communication apprehension are related to low levels of sexual communication satisfaction and vice versa. I expect that a similar pattern will be found in the present study.

I will also make two more predictions concerning sexual communication anxiety. Although I do not have any research that supports these hypotheses, I predict that sexual communication anxiety will serve as a mediator between attachment and relationship and sexual satisfaction. Alternately, I predict that sexual communication anxiety may be a moderator for the association between attachment and sexual satisfaction and for the relationship between attachment and relationship satisfaction.

Sexual Communication or Lack of Sexual Communication Inhibition/Anxiety

Because very little research has been conducted on sexual communication anxiety, I have examined the literature about sexual communication to glean from it pertinent prior findings about its relationship to attachment as well as sexual and relationship satisfaction. In general, communication in relationships refers to “the receiving and giving of emotional and cognitive information” (Cupach & Comstock, 1990, p. 180), and sexual communication in particular is “communication about sex

between partners that is essential to a satisfying sexual relationship” (Cupach & Comstock, 1990, p. 180). Both types of communication are crucial to sexual satisfaction and relationship satisfaction. Sprecher and Cate (2004) suggest that sexual communication can be difficult to measure, since it tends to be nonverbal and usually takes place during sexual activities. Despite their claim, some studies exist that have measured how sexual communication influences sexual satisfaction and relationship satisfaction.

In their study of sexual self disclosure and sexual satisfaction in dating relationships, Byers and Demmons (1999) studied 52 women and 47 men in dating relationships. The sample was largely Caucasian and Canadian and their mean age was 19.3. Eighty five percent of the participants were in an exclusive dating relationship and, on average, had 3.4 previous sexual partners. Relationship satisfaction and sexual satisfaction were measured with the Global Measure of Relationship Satisfaction (GMRS; Lawrance & Byers, 1992b) and the Global Measure of Sexual Satisfaction (GMSS; Lawrance & Byers, 1992b) respectively. The Exchanges Questionnaire (EQ; Larwance and Byers, 1995) was used to measure sexual exchanges, which refers to the sexual acts that are given and received between partners.

The results indicated that on average, higher levels of sexual self disclosure were related to higher levels of relationship satisfaction, which was predictive of sexual satisfaction. Overall, respondents were more disclosing about sexual likes than dislikes, with women reporting higher self disclosure about both non-sexual and sexual topics. In addition, higher levels of sexual self disclosure were positively related to sexual

satisfaction for both men and women. This could have been because of the relationship between sexual self disclosure and sexual exchanges. That is, higher levels of sexual self disclosure were related to higher levels of sexual rewards and fewer sexual costs. Furthermore as noted in an earlier study (Lawrance & Byers, 1995), when sexual rewards outweigh costs, sexual satisfaction results.

Banmen and Vogel (1985) examined the relationship between sexual communication and marital satisfaction. Forty-four couples participated in this study, 22 of whom were seeking marital therapy and 22 of whom were not. All participants were Caucasian and lived on the Canadian West Coast. The Dyadic Adjustment Scale (DAS; Spanier, 1976), Marital Communication Inventory (MCI; Bienvenu, 1978), and the Sexual Communication Inventory (SCI; Bienvenu, 1980) were used to measure marital satisfaction, general communication, and sexual communication respectively.

The researchers found that the levels of marital satisfaction, general communication, and sexual communication were much lower for the clinical couples than for the non-clinical couples. Additionally, the results showed that all three variables had a strong positive relationship with each other, but the strength of the relationships was different for the clinical and non clinical couples. The relationship between marital satisfaction and sexual communication was stronger ($r=.68, p<.001$) for those who were not satisfied with their relationship, which was characteristic of the clinical couples. Furthermore, in unsatisfied couples, a strong positive relationship between general communication and sexual communication existed ($r=.76, p<.001$). For those who were relationally satisfied, which was characteristic of the non-clinical couples, the relationship

between relationship satisfaction and sexual communication was still positive ($r=.43$, $p<.001$) yet not quite as strong as for those of the clinical couples. The relationship between general communication and sexual communication also was not as strong ($r=.36$, $p<.001$) when comparing the non-clinical couples to the clinical couples.

Litzinger and Gordon (2005) conducted a study that examined the relationships among sexual satisfaction, communication, and marital relationship satisfaction in 113 married couples. The study was conducted in both a southern university town and in a mid-Atlantic metropolitan area. The mean ages for male and female participants were 42.2 and 44.2 years respectively. The participants were 89% Caucasian and 11% African American. A subscale from the Inventory of Specific Relationship Standards (ISRS; Baucom, Epstein, Rankin, & Burnett, 1996) was used to measure sexual satisfaction, the Communications Patterns Questionnaire (COQ; Christensen & Sullaway, 1984) was used to measure communication, and the Dyadic Adjustment Scale (Spanier, 1976) was used to measure marital satisfaction.

The results revealed that sexual satisfaction and constructive sexual communication were both positively related to marital satisfaction. Constructive sexual communication refers to exchanges that produce possible solutions to problems and also involve compromise. On the other hand destructive communication refers to communication in which no possible solutions are discussed and no compromise is made when it comes to the sexual relationship. Furthermore, the negative relationship between destructive communication and marital satisfaction was not as strong when the couple was sexually satisfied. In addition, at high levels of constructive communication, sexual

satisfaction did not have a significant relationship to marital satisfaction. On the other hand, sexual satisfaction was a significant predictor of marital satisfaction when constructive communication was low.

In their study of 402 married individuals, Cupach and Comstock (1990) investigated the relationships between sexual communication, sexual satisfaction, and relationship satisfaction. A sample of 1000 participants was randomly drawn from the population of married individuals at a large public university. Of these, 402 participants returned fully completed surveys. The mean age of the participants was 33, and they had been married for an average of 10.4 years. Marital satisfaction was measured with the Dyadic Adjustment Scale (DAS; Spanier, 1976), sexual satisfaction with the Index of Sexual Satisfaction (ISS; Hudson, Harrison, & Crosscup, 1981), and sexual communication satisfaction with a measure developed by Wheelless, Wheelless, and Baus (1984).

The results indicated that sexual communication satisfaction was positively related to both sexual satisfaction and marital satisfaction. A mediational model was also tested to see if sexual satisfaction was affected by the relationship between sexual communication satisfaction and marital satisfaction. The results supported the hypothesis that sexual satisfaction mediated the relationship between sexual satisfaction and marital satisfaction. At high levels of sexual satisfaction, quality sexual communication was more likely to lead to marital satisfaction, whereas at low levels of sexual satisfaction, quality sexual communication and marital satisfaction were not significantly related. (This sounds like a moderation but the article said mediation)

MacNeil and Byers (2005) conducted a study in which they examined the relationships between sexual self disclosure and sexual satisfaction in dating couples. In general, self disclosure refers the communicating of personal information about oneself to another (Sprecher and Hendrick, 2004). Sexual self disclosure, on the other hand, refers to the communication between partners about their likes and dislikes concerning sexual techniques (Byers and Demmons, 1999). Additionally, the researchers examined sexual rewards and costs and the impact that each partner's understanding of each of these had on sexual self disclosure and sexual satisfaction.

The sample for this study consisted of 74 college students and their partners. Most of the participants (89%) have previously engaged in sexual intercourse with their partners. Participants ranged in age from 17 to 33 years with a mean age of 20.5 years. To measure sexual self disclosure, the authors used the Sexual Self Disclosure questionnaire (SSD; Byers & Demmons, 1999), which measures the amount of sexual likes and dislikes that partners have communicated to each other. The Primary Communication Inventory (PCI; Navran, 1967) was used to measure the self disclosure about non sexual topics between partners. They also used the Global Measure of Sexual Satisfaction (GMSS) and the Global Measure of Relationship Satisfaction (GMRS; Lawrance and Byers, 1992b) to measure sexual satisfaction and relationship satisfaction respectively. Lastly, the Sexual Rewards and Costs Checklist (SRCC; Lawrance & Byers, 1998) and the Sexual Exchanges Questionnaire (SEQ; Lawrance & Byers, 1998) were used to measure the level of sexual rewards and costs that each partner experienced in their sexual relationship.

Results indicated that sexual and non-sexual self disclosures were each related to women's overall relationship satisfaction. Women's and men's non-sexual self disclosure and women's sexual self disclosure were positively related to sexual satisfaction for women. Also, for women, sexual and relationship satisfaction had a significant positive relationship. The researchers also found that when controlling for relationship satisfaction, the relationship between self disclosure and sexual satisfaction for women was not as strong. This means that relationship satisfaction was a partial mediator of the relationship between self disclosure and sexual satisfaction for women.

In contrast to the women in this study, only non-sexual self disclosure was associated with relationship satisfaction for the men. It was also found that both sexual and non-sexual self disclosure were positively associated with men's sexual satisfaction. But consistent with the women's responses, high levels of relationship satisfaction for the men were associated with high levels of sexual satisfaction and vice versa.

Lastly, the results indicated that the balance of sexual rewards and costs in a relationship and the understanding of the sexual rewards were related to women's level of sexual self disclosure. For men, sexual self disclosure was associated with their female partner's understanding of their sexual rewards and the men's perception that their sexual rewards outweighed sexual costs.

Overall, the results from these studies indicate that sexual communication is positively related to relationship satisfaction and sexual satisfaction. Higher levels of sexual communication are related to higher levels of relationship satisfaction and sexual

satisfaction and vice versa. I expect to find these same results in my sample of college undergraduates, controlling for the other variables in the models.

Attachment

Attachment in infancy is based on the idea of having a secure base from which one can venture forth to explore and then return to when in need of comfort. In infancy and childhood, the secure base exists for the child, not the caregiver; it is uni-directional. In the adult attachment literature, the couple relationship is proposed as a mutual secure base for both partners, providing a base for exploration and a safe harbor when comfort is needed.

Adult attachment style is generally conceptualized along two dimensions, which are attachment anxiety and attachment avoidance both of which are insecure types of attachment (Brennan, Clark, & Shaver, 1998). Individuals who are anxiously attached are generally worried about being abandoned, rejected, or unloved and those who are avoidantly attached are typically rejecting of closeness. There are three forms of attachment insecurity which are formed through combinations of attachment anxiety or avoidance (Kane, Jaremka, Guichard, Ford, Collins, & Feeney, 2007). Those who are highly avoidant and anxious are considered preoccupied; those with high levels of anxiety and low levels of avoidance are considered dismissing; those with low levels of anxiety and high levels of avoidance are categorized as fearful. In contrast to the insecure types of attachment, securely attached people tend to have low levels of attachment anxiety and avoidance. They also tend to feel worthy of love and are comfortable with closeness in relationships. (Banse, 2004; Feeney, 2004; Stackert and Birsik, 2002; Sumer

and Cozzarelli, 2004). I will now examine the relationships between attachment style and both relationship and sexual satisfaction.

Stackert, and Birsik, (2002) examined the relationships between adult attachment, irrational beliefs, and relationship satisfaction in young adults. Irrational beliefs, those that are self defeating and illogical, were assessed with the Relationship Belief Inventory (RBI; EIdelson & Epstein, 1982), adult attachment was measured by the Hazan and Shaver Attachment Style questionnaire (AS; 1987) and relationship satisfaction by the Relationship Assessment Scale, (RAS; Hendrick, 1988). The participants were 118 undergraduates of whom 68 were women and 50 were men. Participants ranged in age from 17 to 28 years with a mean age of 18.9 ($SD= 2.5$). Eighty-three percent of the participants were Caucasian, 6% were African American, 4% were Asian American or Asian, 4% were Hispanic and the remaining 2% were Middle Eastern. The results indicated that avoidantly and anxiously attached participants endorsed significantly more irrational beliefs than securely attached participants. There was no significant gender difference. Additionally, higher levels of irrational relational beliefs were associated with lower levels of relationship satisfaction for both men and women. Lastly, the results of this study indicated that securely attached participants had more satisfying relationships than anxious or avoidant participants, regardless of gender.

Sumer and Cozzarelli (2004) examined the relationship between attachment style and relationship quality with self attributions as the mediator between the two. Self attributions refer to the feelings that are projected onto one's self in regards to behaviors that one performs and partner attributions refer to the feelings that are projected onto

others in regards to specific behaviors that are observed. Attributions can be positive or negative; positive attributions are those that assign a positive meaning to one's or another's actions and negative attributions are those that assign a negative meaning to one's or another's actions. Attachment style was measured with the Relationship Questionnaire (RQ; Bartholomew & Horowitz, 1991) and the Relationship Scale Questionnaire (RSQ; Griffin & Bartholomew, 1994). The Relationship Attribution Measure (RAM; Fincham & Bradbury, 1992) was used to assess attributions for partner's behaviors while self behaviors were measured by a modified version of this same measure.

The participants were 352 Kansas State University Students of whom 259 (74%) were females and 93 (26%) were male. The mean age of the participants was 19.8 years ($SD= 6.82$). Most of the participants (94%, 332) were not married, while 20 (6%) were. Ninety percent of the sample was Caucasian. The results indicated that people tended to have similar attribution styles for themselves and their partners, meaning that if a person made mostly negative attributions towards themselves, they also did so towards a partner. It was also found that negative attributions were negatively associated with relationship satisfaction while positive attributions were positively associated with relationship satisfaction. In addition, participants classified as secure were most likely to make partner enhancing attributions for their own and partners' behaviors than the anxiously or avoidantly attached. Lastly, the results from this study indicated that attachment anxiety was more predictive of attribution style than attachment avoidance.

Banase (2004) examined the relationship between adult attachment and marital satisfaction in 333 married couples. Here, Banase used individual and partner's attachment style to predict each person's level of relationship satisfaction. Participants, who ranged from 25-35 years in age, were married for at least three years, and couples in which the husband did not exceed the wife's age by more than ten years were preselected as the sample for this study. A German version of the Relationship Assessment Scale (RAS; Hendrick, 1988) was used to measure marital satisfaction while attachment was measured using an adaptation of the Relationship Questionnaire (RQ; Bartholomew and Horowitz, 1991).

The results indicate that secure attachment was positively related to marital satisfaction while fearful or dismissing (avoidant) and preoccupied (ambivalent/anxious) attachment styles were negatively related to marital satisfaction. More specifically, secure attachment was related to higher levels of marital satisfaction and fearful, dismissing, and preoccupied attachment styles are related to lower levels of marital satisfaction.

The attachment style of one partner was used to predict the relationship satisfaction of the other partner in a study by Kane et al. (2007). The researchers also examined the effects of caregiving which refers to the amount of perceived social support and care between partners in the relationship; social support was thought to mediate the relationship between attachment style and relationship satisfaction. Two samples were used in this study. In sample one, the participants were 103 dating couples from the University of California at Santa Barbara and 202 dating couples from the Southern University of New York and USCB. Although the data were collected as two

samples, both samples were combined for this study. Participants were those enrolled in introductory psychology classes and the mean ages for the women and men were 19.6 (range = 16-35) and 20.5 (range = 17-40) respectively. In sample one, 67% of the population was Caucasian, 13% Asian/Pacific Islander, 9% Latino/Hispanic, and 4.5 % African American.

The Experiences in Close Relationships Scale (ECR; Brennan, et al., 1998) was used to measure attachment style. They also completed the perceived social support subscale of the Quality of Relationships Inventory (QRI; Pierce, Sarason, & Sarason, 1991). Six items were created to measure the extent to which partners were perceived as being responsive, sensitive caregivers as well as six items that assess the extent to which partners respond negatively to bids for caregiving. Lastly, relationship satisfaction was measured with the relationship satisfaction subscale of the Investment Model Scale (IMS; Rusbult, Martz, and Agnew, 1998).

The results show that men who reported high avoidance tended to have low relationship satisfaction. The partner effects also revealed that men perceived lower relationship satisfaction when their partner was avoidantly attached. For women, the securely attached reported the highest levels of relationship satisfaction whereas those who were more avoidantly attached reported the lowest relationship satisfaction. Additionally, women tended to have lower relationship satisfaction when their male partners were higher in avoidance. Lastly, the results indicated that the relationship between attachment and relationship satisfaction was mediated by male and female perceptions of partner care.

Feeney (1994) examined the relationships between attachment style and relationship satisfaction in a sample of 361 married couples at various stages of marriage. Fifty –six percent of husbands and 55% of wives had received some form of college education, 23% of husbands and 26% of wives had completed only high school, 17% of husbands and 15% of wives completed some high school, and the remaining 4% of both husbands and wives only attended primary school. The Love Experiences Questionnaire (LEQ; Hazan and Shaver,1987)was used to measure attachment style. Communication was measured with the Communications Pattern Questionnaire (COQ; Christensen and Sullaway, 1984) and relationship satisfaction was with the Quality Marriage Index (QMI; Norton, 1983).

The results from this study indicated that overall for both men and women, attachment security was associated with higher reports of relationship satisfaction and vice versa. The results also showed that for men, wives' anxiety was negatively associated with their relationship satisfaction. Also, attachment anxiety for husbands was predictive of lower relationship satisfaction for both partners. Additionally, the researchers found that for husbands and wives the relationship between attachment style and relationship satisfaction was mediated by communication patterns, although the mediation was stronger for women than for men.

The general finding in the above articles is that attachment security is related to higher levels of relationship satisfaction, while attachment anxiety and avoidance are related to lower levels of relationship satisfaction. In my sample of college undergraduates, I expect that the same general pattern will be found.

Attachment and sexual satisfaction

The relationship between attachment, sexual satisfaction, and relationship satisfaction was examined by Birnbaum (2007). The sample consisted of Israeli women aged 24 through 67 with a mean age of 45 ($SD=11.9$). Most participants were currently involved in a romantic relationship. Of the participants, 70% were married, 17% were single, and the remaining 13% were separated, divorced, or widowed. A Hebrew version of the Experiences in Close Relationships Scale (ECR; Brennan, Clark, & Shaver, 1998) was used to assess attachment and the Israeli Sexual Behavior Inventory (ISBI; Kravetz, Drory, & Shaked, 1999) was used to measure sexual functioning. Here, sexual functioning had four components: sexual satisfaction, sexual arousal, orgasmic responsiveness, and intimacy during sexual intercourse. Relationship satisfaction was measured with a Hebrew version of the Relationship Assessment Scale (RAS; Hendrick, 1988).

Birnbaum found that for the women in the study, on average, being anxiously attached was more detrimental to sexual functioning than being avoidantly attached. In addition, attachment anxiety was more detrimental to relationship satisfaction than attachment avoidance, but avoidance was not significantly related to relational and sexual satisfaction. Birnbaum also hypothesized that sexual satisfaction was a mediator for the association between attachment anxiety and relationship satisfaction. This hypothesis was supported. This means that at high levels of attachment (secure attachment) sexual satisfaction was a stronger predictor of relationship satisfaction than at lower levels of

attachment (insecure attachment) Yes, once again mediation is sounding like moderation.

In a similar study, Birnbaum, Reis, Mikulincer, Gillath, and Orpaz, (2006) investigated the relationships between attachment style, sexual experience, and relationship quality in two different studies. In the first study, the researchers examined the relationships between attachment style and the experience of sexual intercourse. They predicted that attachment avoidance would be related to a stronger desire for a partner's emotional involvement in sexual intercourse and those with anxious attachment would more strongly emphasize the aversive aspects of sex. This study was retrospective in nature with 224 women and 276 men who were heterosexual. The participants completed questionnaires developed by Birnbaum and Laser-Brandt (2002) to assess the relational components of sex, aversive components of sex, sex related pleasure and ecstasy. Additionally, they completed an adult attachment scale developed by Mikulincer, Florian, and Tolmacz (1990). The results indicated that attachment anxiety significantly predicted the feeling of being loved in that the higher the anxiety, the less the participant reported feeling loved by a partner and vice versa. Additionally, anxious attachment was associated with a stronger desire for partner involvement during sexual intercourse.

Along with attachment anxiety, attachment avoidance was found to be positively related to aversive thoughts and feelings towards sex, although women reported fewer aversive thoughts and feelings than did men. Anxiety and avoidance had differing effects on pleasure related feelings of sex, with higher levels of anxiety being associated with

higher feelings of pleasure and higher levels of avoidance being related to lower feelings of sexual pleasure and vice versa.

The second study, involved 41 cohabiting/married couples. To address the limitation of study one being a retrospective study, study two utilized a diary method to record relationship quality and feelings about sexual intercourse over a 42 day period. This diary was used to record daily relationship behaviors and quality, and daily sex related feelings and cognitions. Although a diary record was used, the participants did fill out a questionnaire packet which included the Experiences in Close Relationships scale (ECR; Brennan, Clark, & Shaver, 1998), and a background/demographic questionnaire.

The purpose of this second study was to examine whether or not enhancing/damaging relational behaviors would be affected by whether or not the couple had sexual intercourse the previous day. Relationship enhancing behaviors are those that are positive and foster closeness between partners (e.g. “I told my partner I loved him today,”) and relationship damaging behaviors are those that are negative and do not foster closeness between partners (e.g. my partner was inattentive and unresponsive to me”). In addition, they examined whether or not the enhancing/damaging relational behaviors and occurrence of sexual intercourse was moderated by the participants anxious or avoidant attachment orientations. The results indicated that men reported more relational enhancing behaviors, fewer relational damaging behaviors, and increased relational quality the day following sexual intercourse whereas women reported fewer relationship damaging behaviors on days following sexual intercourse. Sexual intercourse on the previous day did not affect women’s reports of relational enhancing behaviors. For men,

anxious attachment moderated the relationship between sex on the previous day and the following day's relationship enhancing/damaging behaviors and relationship quality: higher attachment anxiety was related to higher reports of relationship enhancing behaviors and relationship quality on days following sexual intercourse. In regards to avoidant attachment, reports of participants' daily relational interactions were not affected by the previous day's sexual intercourse.

These results of these studies show that attachment style is a predictor of sexual satisfaction. Those with attachment security tended to have higher levels of sexual satisfaction than those with attachment insecurity. I expect that attachment security will be related to high levels of sexual satisfaction and attachment insecurity will be related to lower levels of sexual satisfaction in my sample.

Attachment and sexual communication anxiety

The relationship between attachment and sexual communication anxiety has been examined in the Davis et al. (2006) section of this review. As the reader can recall, attachment and sexual communication anxiety were negatively related. High levels of attachment (attachment security) were related to lower levels of sexual communication anxiety while low levels of attachment (anxious and avoidant) were related to higher levels of attachment anxiety. I expect this pattern to be replicated in the present study.

Attachment and sexual communication (lack of sexual communication anxiety)

As no known studies have investigated the relationship between attachment and sexual communication, I review one of the articles that has been conducted in the area of attachment and communication, in general. Jones (2005) examined the relationship between attachment style and affective communication skills in a sample of 280 participants of whom 34% were male and 76% were female. The participants' ages ranged from 20-58 with a mean age of 26.8 years. Two-hundred twenty eight (81%) participants were white, 26 (9%) were Black, and the remaining participants (10%) were Hispanic, Pacific Islander, or Native American. Affective communication skills refer to six components of communication including comforting, ego support, expressivity, listening, behavioral regulation, and conflict management. The affective and instrumental communication skills were measured with the Communication Functions Questionnaire (CFQ; Burlison & Samter, 1990) while attachment style was measured with a four item scale that was developed especially for this study.

The researchers found that attachment avoidance was negatively associated with affective communication while attachment anxiety and affective communication did not have a significant relationship, regardless of participants' sex. These results also revealed that women, on average, rated affective communication skills as more important to them than to men.

Though sexual communication was not examined in this article, I expect that a similar type of relationship will be found for sexual communication anxiety and attachment. Thus, in my sample of college undergraduates, I expect that secure

attachment will be related to lower levels of sexual communication anxiety and insecure attachment will be related to higher levels of sexual communication anxiety.

Based on this literature review, I present the following 5 hypotheses for this study:

Hypothesis 1: Attachment style is related to fear of sexual communication: People with anxious and avoidant attachment styles will have more fear, while those with secure attachment will have less.

Figure 1: Hypothesized path model of attachment and sexual communication anxiety



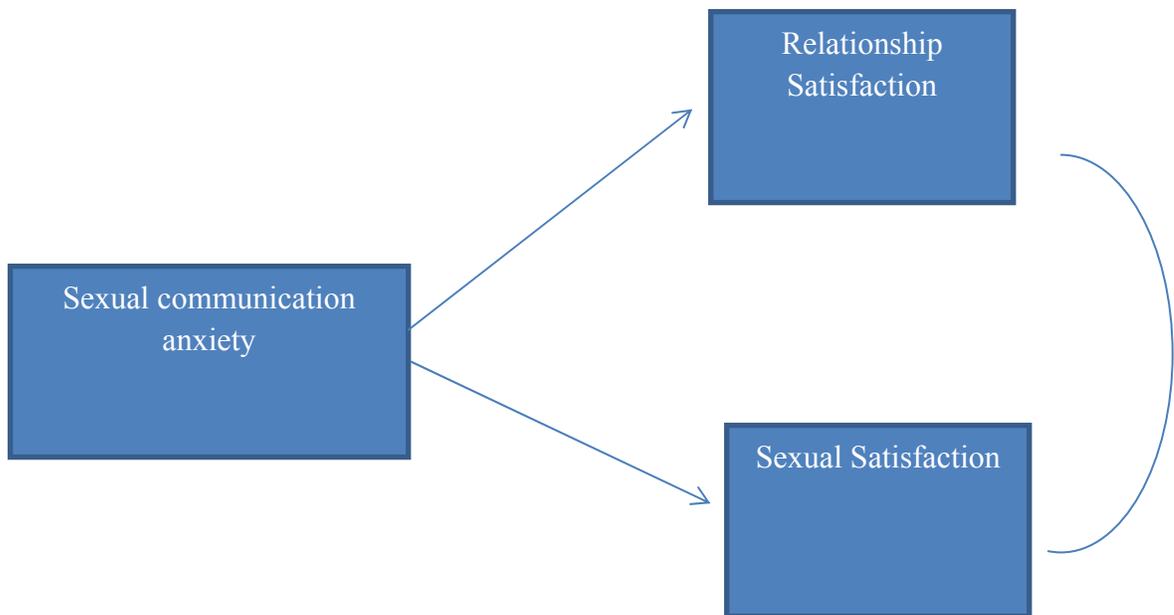
Hypothesis 2: Attachment will be related to sexual satisfaction and relationship satisfaction. Secure attachment will be related to high levels of sexual and relationship satisfaction whereas avoidant and anxious attachment will be related to low levels of sexual and relationship satisfaction. Relationship and sexual satisfaction, controlled for attachment, will be positively related.

Figure 2: Hypothesized path model for attachment, relationship satisfaction, and sexual satisfaction



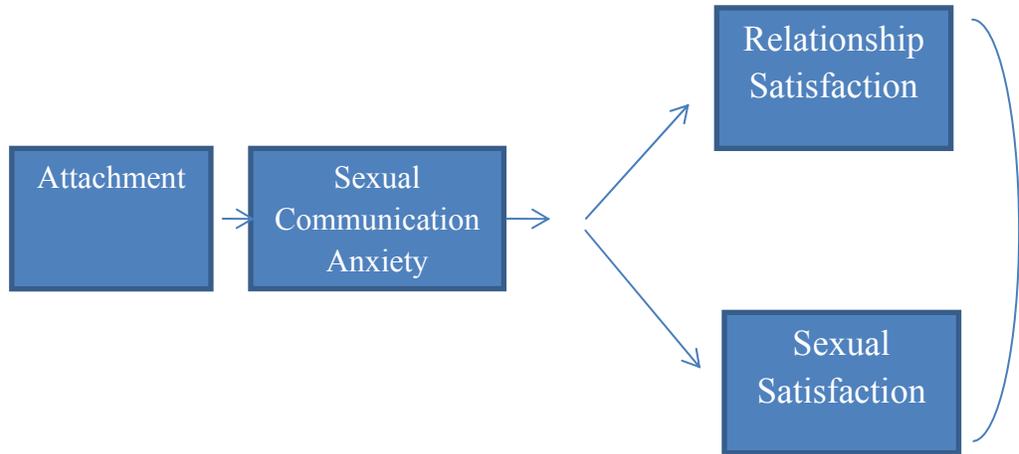
Hypothesis 3: Sexual communication anxiety will predict relationship satisfaction and sexual satisfaction. Higher levels of sexual communication anxiety will be associated with lower levels of relationship satisfaction and sexual satisfaction. Relationship and sexual satisfaction, controlled for sexual communication anxiety, will be positively related.

Figure 3: Hypothesized path model for sexual communication anxiety, relationship satisfaction, and sexual satisfaction



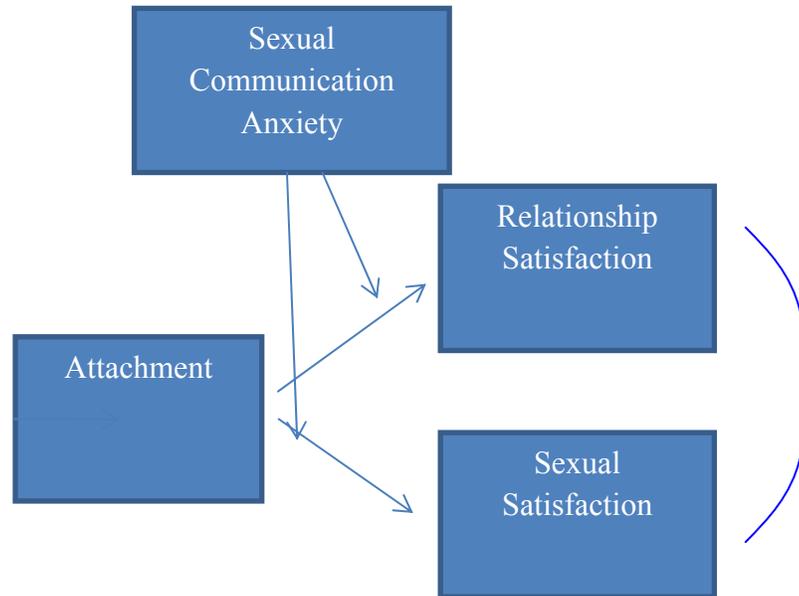
Hypothesis 4: Sexual communication anxiety is an intervening variable of attachment's association with relationship and sexual satisfaction.

Figure 4: Hypothesized path model for attachment, sexual communication anxiety, relationship satisfaction, and sexual satisfaction



Exploratory Hypothesis 5: Sexual communication anxiety moderates the association between attachment and relationship satisfaction, and between attachment and sexual satisfaction.

Figure 5: Exploratory path model for sexual communication anxiety, attachment, relationship satisfaction, and sexual satisfaction



METHOD

Participants

Participants were Auburn University undergraduate students who were enrolled in HDFS 2010: Lifespan Human Development in the Family Context, HDFS 2030: Professional Development and Ethics, HDFS 3010: Child Development and the Family, HDFS 3060: Patterns of Family Interaction, and HDFS 3080: Development of Interpersonal Skills. I contacted the professors of the above classes and went to their respective classes to offer the students enrolled in them the opportunity to participate in this study. Participants were given extra credit in an amount that was determined by their professors as compensation for completing the survey. I informed them in my presentation to each class that each participant would only be able to use the extra credit for one HDFS class.

The questionnaires for this study were available online through www.surveymonkey.com. After presenting to each class, I obtained an email list from each respective class of people who were willing to participate. From there, I sent each participant a link to the survey along with the required information letter. This link was the only way that a participant was able to access the survey and this ensured that each person completed the survey only one time. The surveys were available to participants from April 13- April 17. After the cutoff time was reached at 8:00 p.m. on April 17, I

compiled the list of emails of those who completed the surveys and sent a confirmation email to their professors as proof that they completed the surveys so that they would receive their extra credit.

Sample

The sample originally consisted of 127 participants, 123 of whom were female and 4 of whom were male. Since the male sample size was so much smaller than the female sample size, the 4 males in the sample were dropped. Of the remaining participants, 92% (112 participants) were European American and the remaining 8% were either African American (8) or Hispanic (2). This is not representative of the Auburn University population, of which 40% of the students are European American females and 5% African American females. Only one person did not provide information about her race. Participants ranged in age from 18-33 with a mean age of 21 ($SD= 1.73$). Of these 123 women, 66% (81 women) were currently in a romantic relationship. The average length of time in the relationship was 29 months ($SD= 27.46$) and this length ranged from 1 month to 189 months. The sexual experiences of the participants varied greatly with a range of sexual partners from 0 to 20. The average number of partners was 2.42 ($SD= 3.57$)

Measures

Inhibition of Need Expression, Sexual Communication Scale (Davis, et al., 2006) was used to measure sexual communication anxiety. A series of 18 statements were answered on a 5-point Likert scale with responses ranging from “not at all like me” to

“completely like me.” Participants responded to statements such as “If my partner is unhappy with our sex life, I would rather not know about it,” “If we’re having problems with sex, I tend to let them build up for a long time before I say anything,” and “If I want to have sex, I’m more likely to “*hint*” around that I’m interested instead of just asking outright.” Cronbach’s alpha for this scale was $\alpha=.83$ in this sample.

The *Experiences in Close Relationships Scale* (Brennan, et al., 1998) was used to measure attachment style. This is a 36 item scale that measures attachment style along the dimensions of attachment anxiety and avoidance. Responses were measured on a 5-point Likert scale with responses ranging from strongly disagree to strongly agree. Statements like “I worry about being alone,” and “When I am not involved in a relationship, I feel somewhat anxious and insecure” were used to assess attachment anxiety. Statements such as “I am nervous when partners get too close to me,” and “I find it difficult to allow myself to depend on romantic partners” were used to measure attachment avoidance. Although the primary dimensions of this scale are anxiety and avoidance, low scores on each of these dimensions are indicative of secure attachment. Cronbach’s alpha in this sample was $\alpha=.94$ for avoidance and $\alpha=.89$ for anxiety.

Physical Satisfaction Scale (Davis, et al., 2006) was used to measure sexual satisfaction. Cronbach’s alpha was $\alpha=.83$ and participants rated the degree to which they agreed with 11 statements presented in the scale such as “I am satisfied with the quality of sex in my relationship,” “I am usually able to satisfy my sexual needs in my relationship,” and “I would like to be able to get more physical satisfaction out of sex.” Statements were answered on a 5-point Likert scale.

Quality Marriage Index (Norton, 1983) was used to measure relationship satisfaction. This is a 6- item scale that measures the quality of the relationship as a whole. Participants rated five statements such as “My relationship with my partner makes me happy,” on a 5-point Likert scale. This scale also includes one global statement that measures the overall level of happiness in the relationship. Cronbach’s alpha for this measure was $\alpha=.91$.

RESULTS

Univariate analysis

I used the SAS program for my univariate analysis. Before beginning this analysis, I had to reverse score items from the ECR, QMI, and INE. Then, I estimated the Cronbach alpha for my measures, all of which were relatively high (see Table 1) .

Table 1
Estimated Cronbach alphas for sample (N=123)

Measure	Cronbach Alpha
Physical Satisfaction Scale	.83
Quality Marriage Index	.91
Experiences in Close Relationships	
Subscale: Anxiety	.89
Subscale: Avoidance	.94
Inhibition of Need Expression	.83

A principal components analysis was conducted to see how many composites each scale contained and to see how much weight to give each item. The largest eigenvalues for each scale and the amount of variance that each eigenvalue accounts for is presented in Table 2. For example, the Physical Satisfaction Scale loaded on one

component with an eigenvalue of 5.00 and contains for 46% of the variance in the scale items. The eigenvalues and proportions can be similarly interpreted for each of the scales.

Table 2

Eigenvalues for variables

Scale	Eigenvalue	Proportion of Variance Contained
Physical Satisfaction Scale (PSS)	5.00	.46
Quality Marriage Index (QMI)	4.23	.70
Experiences in Close Relationships		
Subscale: Anxiety (ECR-ANX)	6.47	.36
Subscale: Avoidance (ECR-AV)	9.51	.53
Inhibition of Need Expression (INE)	5.04	.28

Next, I created an average scale score for each item. This was done by summing the items in each scale, then dividing by the total number items . After initially computing these average scores and obtaining the associated standard deviations, some decisions had to be made concerning how many responses could be missing from each participant's responses for these scales. The means and standard deviations were recalculated multiple times, with each substantial recalculation allowing for one more item to be missing. If the recalculated means and standard deviations were similar to the previous one, then one more item could be missing and an average scale score could still

be computed. This procedure allows for the maximum amount of participants' responses to be included in the analysis. I used this procedure to calculate the average scores for each scale. Next, I examined the Wilkes-Shapiro statistic. When looking at the numerical values alone, it appears that the INE, PSS, ECR-ANX and QMI are not normally distributed, while the ECR-AV is distributed normally. So, I looked at each distribution and all of the variables appear symmetric enough. The average scale scores Wilkes-Shapiro, and additional univariate statistics are presented in Table 3.

Table 3

Univariate Statistics for Anxiety about Inhibition of Need Expression Scale, Physical Satisfaction Scale, Experiences in Close Relationships Scale, and Quality Marriages Index

Scales	<i>N</i>	<i>M</i>	<i>SD</i>	Median	Skewness	Range	Kurtosis	W/S
INE	118	3.23	.61	3.23	1.38	2.2-5	1.42	.85 ($p < .001$)
PSS	117	2.30	.58	2.18	.88	1-5	2.45	.92 ($p < .001$)
ECR-AV	119	2.06	.71	2.00	.39	1-3.9	-.73	.95 ($p < .001$)
ECR-ANX	120	2.89	.70	2.83	-.05	1.1-4.6	-.10	1.00 ($p = .97$)
QMI	119	3.70	1.12	4.00	-.33	1.3-5	-1.25	.90 ($p < .001$)

Bivariate Analysis

A bivariate analysis was conducted to examine the relationships that each variable had with each other. This analysis revealed five significant relationships (see Table 4), the strongest of which were between Anxiety and Avoidance ($r = .43, p < .001$), sexual communication anxiety and sexual satisfaction ($r = .40, p < .001$), and avoidance and sexual satisfaction ($r = .39, p < .001$). It is expected that anxiety and avoidance are related since they comprise two dimensions of the same construct. Additionally, these preliminary correlations imply that sexual communication anxiety and sexual satisfaction along with avoidance and sexual satisfaction will be significantly positively related. This idea will be tested when the path analyses are fit to the proposed models.

Table 4
Pearson Correlation Coefficients for Sexual Communication Anxiety (INE), Attachment (ECR-AV, ECR-ANX), Relationship Satisfaction (QMI), and Sexual Satisfaction (PSS) (N=123).

	PSS	QMI	ECR-ANX	ECR-AV	INE
PSS	1.00				
QMI	-.16~	1.00			
ECR-ANX	.00	-.23*	1.00		
ECR-AV	.39***	-.28**	.43***	1.00	
INE	.40***	-.10	-.15	.15	1.00

~ $p < .10$ * $p < .05$ ** $p < .01$ *** $p < .001$

Multivariate Analysis

I used the MPlus program to fit my models using a path analysis. This method allows me to simultaneously estimate the relationships between multiple variables. This program also has the ability to include participants with missing data using Full Information Maximum Likelihood (FIML) estimation (Muthen & Muthen, 1998). A total of five models were fit, each corresponding to the five proposed hypotheses. Hypothesis 1 is tested by Model 1, in which sexual communication anxiety is predicted by attachment. Model 2 tests Hypothesis 2 in which attachment predicts relationship satisfaction and sexual satisfaction. Model 3 tests Hypothesis 3 that sexual communication anxiety predicts sexual satisfaction and relationship satisfaction. Model 4 tests the hypothesis that sexual communication anxiety is the mediator between attachment and sexual and relationship satisfaction (Hypothesis 4). Model 5 tests the hypothesis that sexual communication anxiety moderates the relationship between attachment and relationship satisfaction and attachment and sexual satisfaction (Hypothesis 5). Before examining the results for each model, the fit indices for each model were examined. I looked at Chi-square (χ^2) with its associated degrees of freedom (df) and p-value (see Table 5).

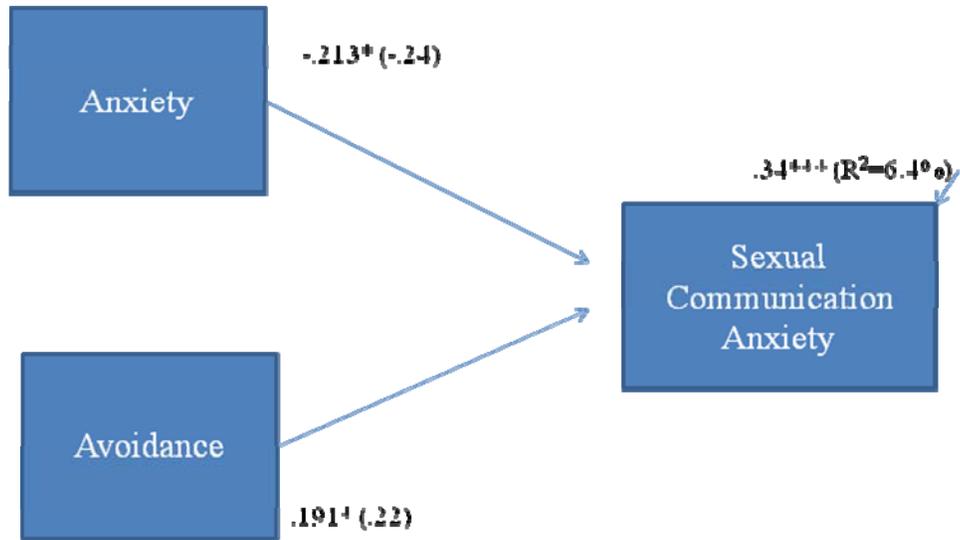
Table 5
Fit statistics for models of regressions fit in Mplus (N=122)

Model	N	χ^2	df (p-value)
Sexual Communication Anxiety on Anxiety and Avoidance	122	7.58	2 (p=.02)
Sexual Satisfaction and Relationship Satisfaction on Anxiety and Avoidance	122	34.04	5 (p=.00)
Sexual Satisfaction and Relationship Satisfaction on Sexual Communication Anxiety	122	24.60	3 (p=.00)
Sexual Satisfaction and Relationship Satisfaction on Sexual Communication Anxiety on Anxiety and Avoidance	122	58.05	9 (p=.00)
Sexual Satisfaction and Relationship Satisfaction on Anxiety and Avoidance moderated by Sexual Communication Anxiety	122	51.82	11 (p=.00)

Hypothesis 1

My first hypothesis posited that sexual communication anxiety was predicted by attachment anxiety and anxiety. More specifically, I hypothesized that sexual communication anxiety would be positively associated anxiety and avoidance. Sexual communication anxiety was simultaneously regressed on anxiety and avoidance. The results indicate that sexual communication anxiety has a significant negative relationship with attachment anxiety ($\beta = -.213, p < .05$). This means that high levels of sexual communication anxiety are associated with low levels of attachment anxiety, and vice versa, controlling for all else in the model. Furthermore, sexual communication anxiety had a significant positive relationship with avoidance ($\beta = .191, p < .05$) meaning that high levels of sexual communication anxiety were associated with high levels of attachment avoidance, and vice versa, controlling for all else in the model. In this model, anxiety and avoidance accounted for 6.4% of the variance in sexual communication anxiety.

Figure 6: Path model for attachment anxiety, attachment avoidance, and sexual communication anxiety

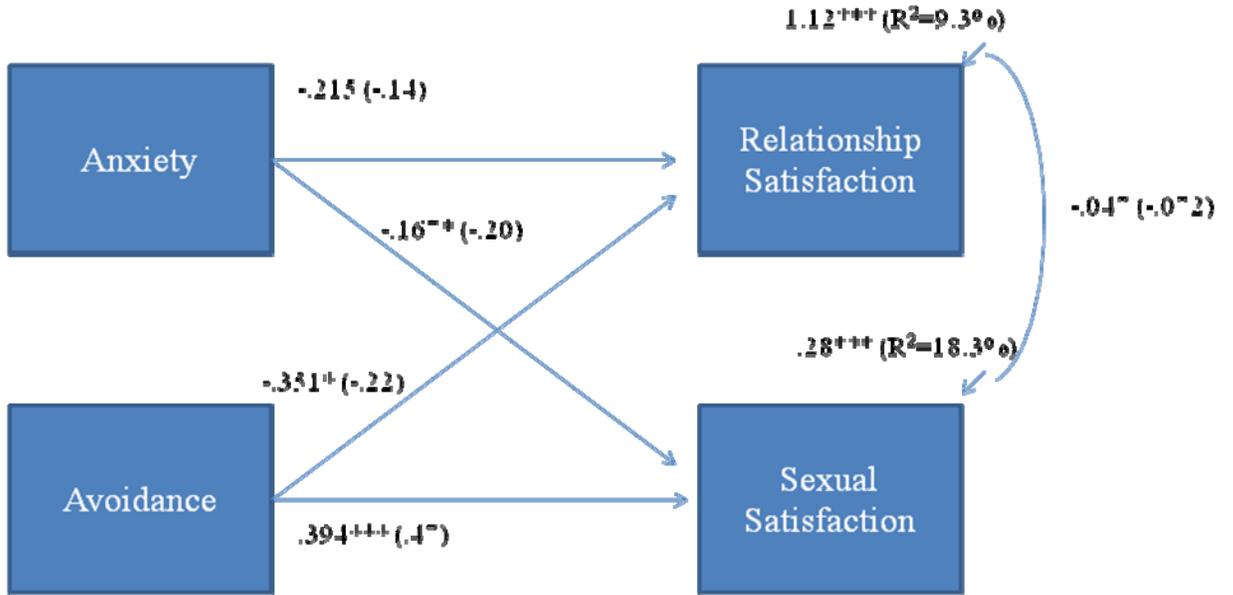


$$\text{Sexual communication anxiety} = 3.45^{***} + .191^* \text{ avoidance} - .213^* \text{ anxiety}$$

Hypothesis 2

I hypothesized that attachment anxiety and avoidance would be negatively associated with relationship satisfaction and sexual satisfaction. Here, relationship satisfaction and sexual satisfaction were simultaneously regressed on attachment anxiety and avoidance. The results indicated that relationship satisfaction had a non-significant relationship with anxiety ($\beta = -.215$) and a significant negative relationship with avoidance ($\beta = -.351, p < .05$). So, relationship satisfaction is not associated with low relationship anxiety, controlling for all else in the model. High relationship satisfaction was associated with low avoidance and vice versa, controlling for all else in the model. Sexual satisfaction was significantly negatively related to anxiety ($\beta = -.167, p < .05$) and significantly positively related to avoidance ($\beta = .394, p < .001$). This means that high levels of sexual satisfaction are, on average, related to low levels of anxiety and high levels of avoidance and vice versa, controlling for everything else in the model. Anxiety and avoidance accounted for 9.3% of the variance in relationship satisfaction and 18.3% of the variance in sexual satisfaction. In this model, the residual variances for relationship and sexual satisfaction were not significantly related.

Figure 7: Path model for attachment avoidance, attachment anxiety, relationship satisfaction, and sexual satisfaction

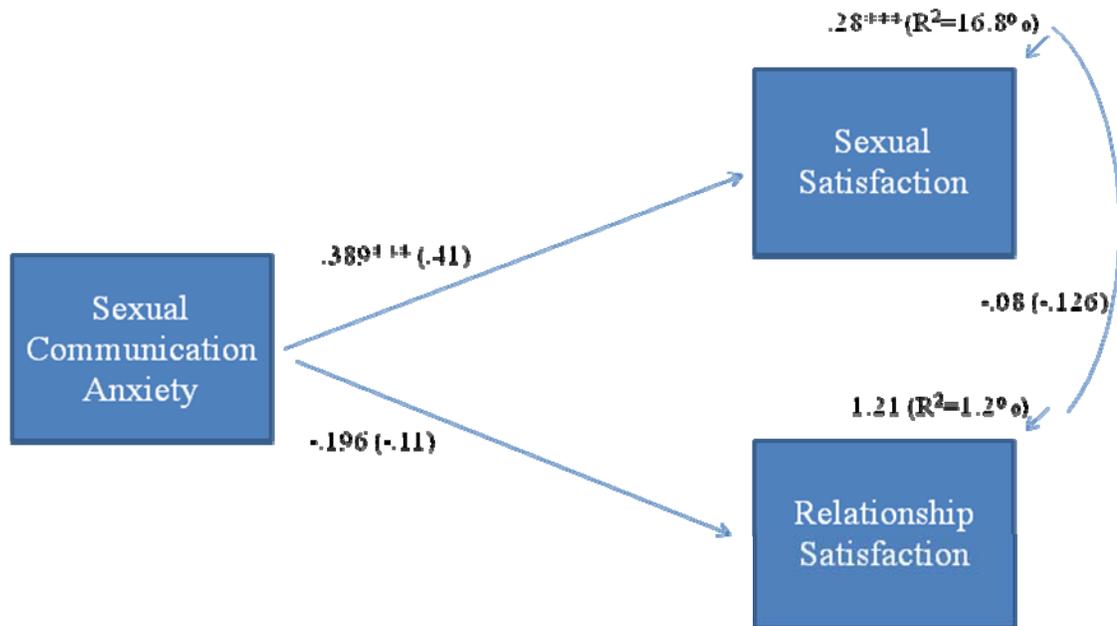


Relationship satisfaction = $5.061^{*} - 0.351^*$ avoidance - 0.215 anxiety**
Sexual satisfaction = $1.974^{*} + 0.394^{***}$ avoidance - 0.16^{**} anxiety**

Hypothesis 3

Hypothesis 3 posited that both sexual satisfaction and relationship satisfaction would be negatively associated with sexual communication anxiety. Here, sexual and relationship satisfaction were simultaneously regressed against sexual communication anxiety. The results show a significant positive relationship between sexual satisfaction and sexual communication anxiety ($\beta=.389, p<.001$), meaning that, on average, high levels of sexual satisfaction were associated with high levels of sexual communication anxiety and vice versa controlling for all else in the model. In contrast, relationship satisfaction did not have a relationship with sexual communication anxiety ($\beta=-.196$). Sexual communication anxiety accounted for 16.8% of the variance in sexual satisfaction and 1.2% of the variance in relationship satisfaction. As with the previous model, the residuals in Model 3 were not significantly related.

Figure 8: Path model for sexual communication anxiety, relationship satisfaction, and sexual satisfaction

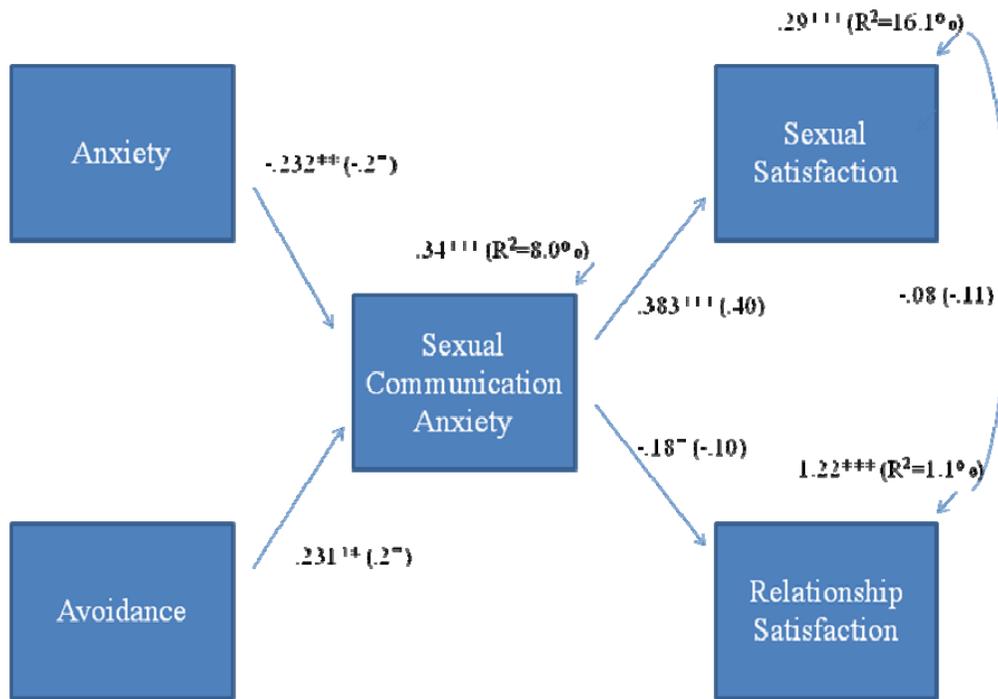


Sexual satisfaction = $1.036^{*} + .389$ sexual communication anxiety**
Relationship satisfaction = $4.34^{*} - .196$ sexual communication anxiety**

Hypothesis 4

Hypothesis 4 posited that relationship and sexual satisfaction would be negatively related to sexual communication anxiety, which in turn would be positively related to attachment and anxiety. The results reveal that sexual satisfaction was significantly positively related to sexual communication anxiety ($\beta = .383, p < .001$), meaning that high sexual satisfaction was, on average, associated with high sexual communication anxiety. Sexual communication anxiety accounted for 16.1% of the variance in sexual satisfaction. Relationship satisfaction was not associated with sexual communication anxiety ($\beta = -.187$). Sexual communication anxiety accounted for 1.1% of the variance in relationship satisfaction. Sexual communication anxiety was significantly negatively related to attachment anxiety ($\beta = -.232, p < .01$) and significantly positively related to attachment avoidance ($\beta = .231, p < .01$). This means that high sexual communication anxiety is, on average, associated with low attachment anxiety and high attachment avoidance. In this model, 8% of the variance in sexual communication anxiety was predicted by attachment anxiety and avoidance. Here, the relationship of the residual variances between sexual satisfaction and relationship satisfaction were non-significant.

Figure 9: Path model for attachment anxiety, attachment avoidance, sexual communication anxiety, relationship satisfaction, and sexual satisfaction

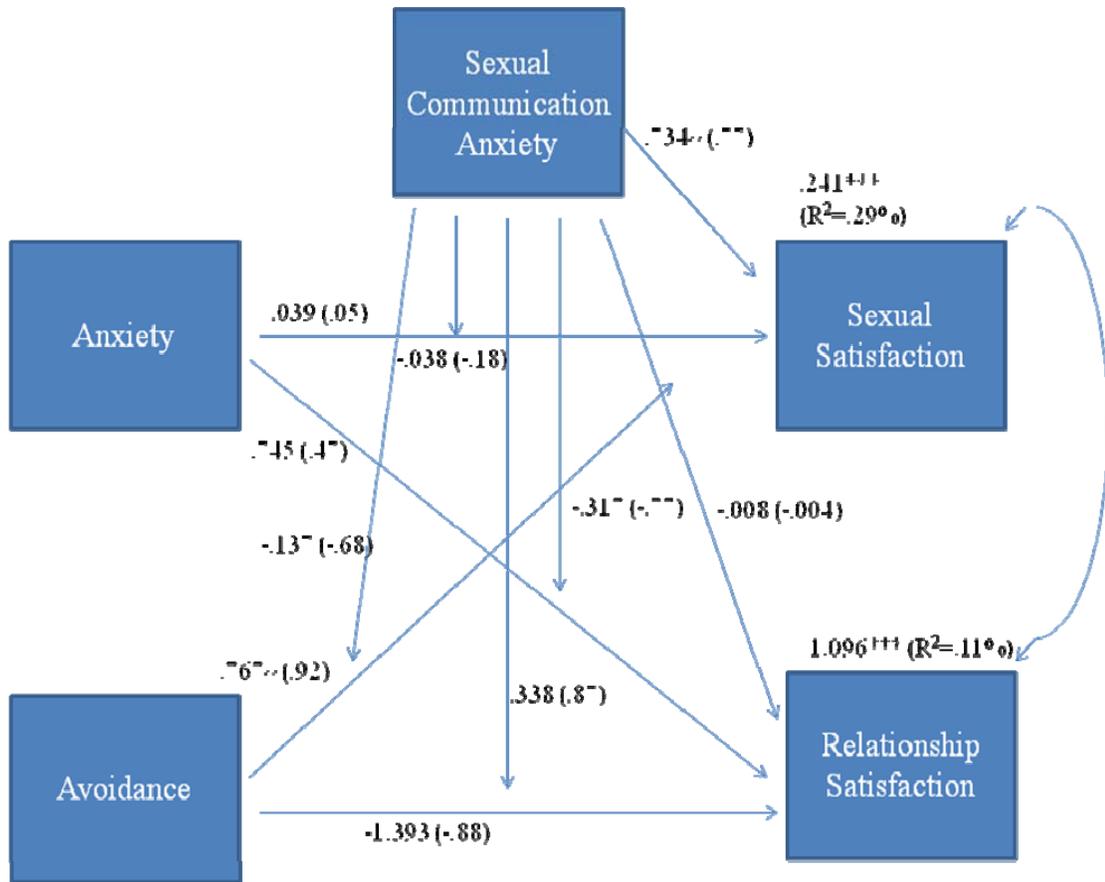


Sexual satisfaction = $1.045^{***} + .383^{***}$ sexual communication anxiety
Relationship satisfaction = $4.338^{***} - .18^*$ sexual communication anxiety
Sexual communication anxiety = $3.48^{***} - .232^{**}$ anxiety + $.23^{**}$ avoidance

Hypothesis 5

Hypothesis 5 posited that the associations among sexual satisfaction and anxiety and avoidance and the associations among relationships satisfaction and anxiety and avoidance were moderated by sexual communication anxiety. When this interaction term was added to the model, none of the paths were significant. In this model, sexual satisfaction was not associated with anxiety ($\beta = .039$), and only moderately positively associated with avoidance ($\beta = .767, p < .10$). Relationship satisfaction was not associated with anxiety or with avoidance ($\beta = -1.393$). Therefore, sexual communication anxiety did not have a moderating influence on the relationships among relationship and sexual satisfaction and attachment avoidance and anxiety.

Figure 10: Exploratory path model for attachment anxiety, attachment avoidance, sexual communication anxiety, relationship satisfaction, and sexual satisfaction



DISCUSSION

Summary of Results

Hypothesis 1: Attachment style is related to fear of sexual communication:

People with anxious and avoidant attachment styles will have more fear, while those with secure attachment will have less. Results from Model 1 indicate that this hypothesis was partially supported. Although attachment, in the form of avoidance or anxiety was significantly associated with sexual communication anxiety, the relationship's direction varied depending on which subscale of attachment is being described. Anxiety and sexual communication anxiety were negatively related in this sample, whereas avoidance and sexual communication anxiety were positively related. Therefore, on average, a woman with high sexual communication anxiety would have high attachment avoidance or low attachment anxiety and vice versa.

The finding that sexual communication anxiety and attachment anxiety are negatively related may be due to the tendency for people with anxious attachment tend to be hypervigilant about many areas of their relationships, especially in relationships with romantic partners . Furthermore, people with high attachment anxiety may be hypervigilant about aspects of their sexual relationship since they tend to have a high fear of abandonment. Thus, the sexual aspects of a relationship would be an area that an

anxious woman would want to discuss to ensure that her partner is satisfied. This would ensure her that her partner might not abandon her. The findings are supportive of this. Women who are anxious tend to have less anxiety about talking about sexual matters with a partner than are those who are not anxious.

The finding that attachment anxiety and sexual communication anxiety are negatively related is in contrast to the findings of the Davis et al. (2006) study. In the Davis study, attachment anxiety and sexual communication anxiety were positively related and this association was mediated by sexual anxiety, which refers to anxiety about having sexual experiences (Davis et al., 2006). It is important to note that this finding in the Davis et al. (2006) article only referred to those who were currently involved in a romantic relationship. For those who were not involved in a relationship in the Davis et al. study, attachment anxiety and sexual communication anxiety were not related. Therefore, we may have found different results in the present study if the women who were involved in romantic relationships were examined against the ones who were not. Or, it may be that the results are just different for undergraduate women. Those who are anxious may not have enough experience yet, to also be anxious about talking about sex.

A woman who is highly avoidant is likely to have high sexual communication anxiety. The finding that sexual communication anxiety and avoidance are positively related is consistent with the Davis, et al. (2006) finding that avoidance and sexual communication anxiety are positively related. In the Davis article, this finding held true for people who were involved in romantic relationships as well as for those who were not. This was a direct path in the present model as well as in the Davis et al. (2006) study. This positive relationship is likely due to the tendency for avoidant people to be fearful of

intimacy. Therefore, talking about sexual matters could foster closeness for a woman and her partner. This potential closeness may be very scary for avoidant women. For that reason, it makes sense that avoidance and sexual communication anxiety are positively related.

Hypothesis 2: Attachment will be related to sexual satisfaction and relationship satisfaction. Secure attachment will be related to high levels of sexual and relationship satisfaction whereas avoidant and anxious attachment will be related to low levels of sexual and relationship satisfaction. Relationship and sexual satisfaction, controlled for attachment, will be positively related. As with Hypothesis 1, this hypothesis was partially supported depending on which dimension of attachment was being examined. In this sample, attachment anxiety had no association with relationship satisfaction. Stakert and Bursik (2004), Banse(2004), Kane et al.(2007) found a negative relationship between attachment anxiety and relationship satisfaction, and I expected the same here. The explanation for why no relationship was found cannot be due to the fact that this sample only included women, because the women and men were analyzed separately in each of the aforementioned studies. One possibility is that for the women in this study, anxiety does not produce any relationship enhancing nor relationship damaging effects on their bonds with their partners. Another possibility is that since those who were and were not involved in romantic relationships were analyzed together, no relationship was found. In the future, it would be important to include a variable in the analysis to indicate whether the respondent was in a significant relationship or not.

Attachment anxiety and sexual satisfaction were found to have a negative relationship, meaning that highly anxious women would be likely to have low sexual

satisfaction. This finding was consistent with findings from Birnbaum (2007), but in contrast to the results from Birnbaum et al. (2006) that found attachment anxiety to be associated with increased feelings of pleasure during sex.

Originally, we surmised that attachment anxiety would be negatively related to sexual satisfaction/Our findings support this and provide more support to the most recent Birnbaum (2007) study. For many women, especially those who are anxious and worried about several things during sexual experiences, sex would not be satisfying. For example if a woman is preoccupied about her physical appearance, how her partner thinks she looks, or how she thinks her partner feels she is performing sexually during sexual experiences, her mind is likely not focused on enjoying sexual activity. It has been argued that the mind is the most powerful sexual organ. Thus if the woman's mind is not focused on the feelings and sensations involved in the experience, then sex will not be as satisfying.

The negative relationship between avoidance and relationship satisfaction was expected because many previous studies found similar relationships (Banse, 2004; Kane et al., 2007; and Stackert and Bursik, 2002). Even if evidence existed to contrast this, I would still expect a negative relationship because people who are avoidant tend to push people away and are fearful of intimacy. Therefore, I would envision that many people with this way of interacting have difficulty getting close to others. This lack of closeness and intimacy would be detrimental to a woman's relationship satisfaction. There are likely other factors that influence the relationship between avoidance and relationship satisfaction, since only 9.3% of the variance in relationship satisfaction is accounted for by anxiety and avoidance.

Women who are more avoidant may be more likely to interact sexually as a way of bonding with a partner. This may be one way to explain the positive relationship between attachment avoidance and sexual satisfaction. Another possibility is that avoidant women do not view sexual activity as a way of bonding since they tend to be rejecting of intimacy. Therefore, sex for those who are avoidant may be more about focusing on and enjoying the sexual experience. This may account for the positive relationship between avoidance and sexual satisfaction. This finding is similar to the Birnbaum (2007) study that found attachment avoidance to be less detrimental to the sexual relationship than attachment anxiety. However, in the Birnbaum et al. (2006) study, avoidance was negatively associated with sexual satisfaction.

In this model, the residuals of relationship satisfaction and sexual satisfaction were not significantly related in this nor any other model. This was not expected considering the evidence that suggests that these two constructs are highly related (Byers, 2005; Sprecher, 2002; Yeh, Lorenz, Wickrama, Conger, and Elder, 2006;). This relationship is likely different because the inclusion of attachment style in this model makes it non-significant. That, once attachment is controlled in the model, the relationship between sexual and relationship satisfaction disappears. Thus the question becomes, how does attachment account for this relationship being non-significant? The answer to this question may be that this was a sample comprised only of college aged women. Previous studies included both men and women. If men were included in this sample, the relationship may become significant. This is a possibility because women may be more likely to view sexual and other types of relational satisfaction as not being highly related. Men on the other hand may be more likely to rate their relationship

satisfaction based on how sexually satisfied they are with their partner. Future research should address this possibility.

Hypothesis 3: Sexual communication anxiety will predict relationship satisfaction and sexual satisfaction. Higher levels of sexual communication anxiety will be associated with lower levels of relationship satisfaction and sexual satisfaction. Relationship and sexual satisfaction, controlled for sexual communication anxiety, will be positively related. Again, this hypothesis was partially supported. Sexual communication anxiety did significantly predict sexual satisfaction but this relationship was positive instead of negative. Davis et al. (2006) also found that sexual communication anxiety was predictive of sexual satisfaction, regardless of whether or not the participants were in a romantic relationship. It was assumed that people who are not comfortable talking about sex would avoid talking about this subject with their partners but this may not be the case. It is important not to assume that uncomfortableness equals avoidance. It may be that the women who are uncomfortable discussing sex do so anyway despite the discomfort that they may experience. Another possibility is that these women may give off physical cues to their partners during sexual activities that act as signals to their partners as to whether or not they are enjoying the experience. Therefore, to explain this positive relationship, it may be that women with high discomfort when discussing sex use other ways to communicate ways to sexually satisfy them.

Sexual communication anxiety and relationship satisfaction were not related in the current study after controlling for attachment and sexual communication anxiety. Although Davis et al. (2006) did not test this relationship, this finding is contrary to expectations since the ability to communicate in general is related to overall relationship

satisfaction . Since sexual communication anxiety is a dimension of communication, I expected that these two would be significantly related. The other side of this argument is that sexual communication is only one dimension of communication in couple relationships. Thus experiencing anxiety when discussing sexual topics with a partner may not be predictive of relationship satisfaction if a woman is able to communicate about other aspects of her relationship.

Hypothesis 4: Sexual communication anxiety is an intervening variable of attachment's association with relationship and sexual satisfaction. This hypothesis was partially supported in that sexual communication anxiety did intervene with the relationship between attachment and sexual satisfaction, but not the relationship between attachment and relationship satisfaction. This is consistent with Davis et al. (2006) in that sexual communication anxiety mediated the relationship between avoidance and sexual satisfaction. Attachment anxiety was also related to sexual satisfaction in their study, but this relationship was mediated by avoidance and sexual communication anxiety.

When compared to Model 1, it is interesting that the paths from anxiety and avoidance to sexual communication are only significant at the $p < .05$ level. In the final model, the significance level increased to the $p < .01$ level. So, in Model 4 these relationships were stronger than they were in Model 1. Apparently, the addition of relationship and sexual satisfaction accounts for these differences. Furthermore, more variance in sexual communication anxiety was accounted for in this model than in Model 1 as the variation increased from 6.4% in Model 1 to 8% in Model 4. But, what remains to be explained is why adding sexual communication anxiety to the model as an intervening variable lowers the percentage of variance explained in relationship

satisfaction from 9.3% to 1.1%. In addition, adding sexual communication anxiety also reduces the variance explained in sexual satisfaction from 18.3% to 16.8% when added as an intervening variable.

The results from this model further confirm the idea that we really do not yet understand sexual communication anxiety. It could be that other types of communication could account for more variation in the outcomes of sexual and relationship satisfaction. Another possibility is that participants may have certain personality characteristics that may be more predictive of sexual communication anxiety than is attachment. Whatever the case may be, future research is needed to determine which variables could account for more of the variation in sexual communication anxiety and what the relationship of this construct is to relationship and sexual satisfaction.

Hypothesis 5: Sexual communication anxiety moderates the association between attachment and relationship satisfaction, and between attachment and sexual satisfaction. There was no support for this model. Therefore, sexual communication anxiety did not have an impact on attachment's relationship with sexual or relationship satisfaction. Considering that there is only one study to date that has examined the construct of sexual communication anxiety, I cannot compare this finding to any other one. It is interesting, however, that the inclusion of sexual communication anxiety as a moderator between the relationships among attachment and relationship and sexual satisfaction makes all of these relationships non-significant. This means that sexual communication anxiety has no influence on these relationships.

Implications of Research Findings

Sex is considered by many women to be a touchy area that is avoided in conversation. For anxious women, this may not be the case. As the results indicate, high attachment anxiety is related to low sexual communication anxiety. It is especially important to remember this as a marriage and family therapist. These women will be more likely to want to discuss sexual topics although this may come off to their partners as nagging. As a therapist, it would be my responsibility to reframe this nagging about the sexual relationship as bids to retain closeness, since this is likely the underlying purpose of the nagging behaviors.

The findings from this study give me some insight about the ways that avoidance will affect sexual communication anxiety. For avoidant women who come in for therapeutic treatment, I should expect that they have high sexual communication anxiety as well. In order to help her overcome this though, attachment issues should be addressed first, in order to allow her to be more comfortable with closeness with a romantic partner. That way, she would be more comfortable having conversations that may foster closeness.

As it relates to relationship and sexual satisfaction, injuries to the woman's attachment orientation to her romantic partner would need to be addressed before sexual and relationship satisfaction could be improved. This insight will be helpful when treating couples where the woman has issues concerning their sexual relationship.

The most significant implication of this study concerns the amount of variance that was unaccounted for in relationship and sexual satisfaction. Since the most variance

explained in sexual and relationship satisfaction was 18.3% and 9.3% respectively and this was in the models that did not contain sexual communication anxiety, this lets me know that there are likely many other factors that contribute to relationship and sexual satisfaction for women and that we do not yet totally understand the usefulness of the sexual communication anxiety construct. Thus, assessment of problems in a couple's relationship needs to extend beyond their attachment orientation and comfort with discussing sexual topics. So, as a therapist, I should assess multiple other areas that may impact their satisfaction with their relationship. Although the focus of this study was on women, this assessment is important for men as well.

Future research

Future research on the relationships among sexual communication anxiety, attachment, and relationship and sexual satisfaction needs to address the limitations concerning the sampling methods. For example, future samples would need to include comparable samples of men and women, and more individuals of various ethnicities and ages. Also, a longitudinal design would allow for assessing whether or not the examined relationships would change over time.

There is a need for further research on the construct of sexual communication anxiety, since the current research on this topic is sparse. And, the results of the current study may muddy more than clarify the waters. As was mentioned earlier, there is only one other study to date that examines sexual communication anxiety. Additionally, factors that contribute to sexual satisfaction and relationship satisfaction are largely unknown, considering the most variance that was accounted for in relationship and sexual

satisfaction was 18.3% and 9.3% respectively and this was in the model without sexual communication anxiety. Further research on the relationships among the variables that were not looked at here, such as other dimensions of communication or conflict resolution tactics, are needed to further explained the unaccounted for variance in these models.

I think it would be interesting if an experimental design could be utilized in the future. This could be accomplished in many ways. These relationships could be tested before and after attending couples or individual therapy to see if therapy participation had any effect on these relationships. Another possibility is that control groups could be used. This could be done by comparing the relationships among the tested variables at multiple times for participants who attended therapy versus those who did not.

Strengths

Since sexual communication anxiety is a relatively new construct, the major strengths of this study are the contribution that these findings add to the present research on sexual communication anxiety. There were several findings that can only be found in this study. These concern the direct negative relationship between sexual communication anxiety and attachment anxiety and the non relationship between sexual communication anxiety and relationship satisfaction. Regardless of whether or not some of the findings can only be found in this study, this research adds to the scholarly knowledge about sexual communication anxiety.

Limitations

The major limitations of this study concern the sampling methods that were employed. The sample of this study consisted only of women. More specifically, this sample consisted mostly of white women in their early twenties. Although four men did complete the surveys, their responses were dropped because the male sample size was not large enough to compare and contrast their results to the women's responses. Additionally, there were only ten women in this sample who identified themselves as African-American or Hispanic. A more racially diverse sample may yield different results. Furthermore, the results of this study may have been different if there was more variation in the ages of the participants. These limitations are to be expected when a convenience sample is utilized. Therefore, since this is a convenience sample, the results may not be representative of any population beyond college women at Auburn University. So, the generalizability of these findings is limited to only young, white women in college.

Another limitation of this survey is that many of the women in this sample report that they have not had any sexual partners. Although it is possible for people who are virgins to have sexual experiences, parts of this survey concerned sexual intercourse. Therefore, some of the women in the sample had to report based on their prospective thoughts and feelings rather than ones they have actually experienced. Similarly, many of the women in this sample were not currently involved in romantic relationships. So, for those who were in relationships, they were likely reporting on their current thoughts and feelings whereas those who were not in relationships were reporting retrospectively on previous relationships.

The data for this study were gathered only one time, thus making this a cross sectional study. This means that we only see a limited view of the of this sample's level of sexual communication anxiety as it relates to attachment and relationship and sexual satisfaction. It is possible that a woman's level of sexual communication anxiety will vary over her lifespan, which would differentially affect the relationships among the other variables. Unfortunately, the present study cannot assess this since the data were only collected once.

Conclusion

This study allowed us to test sexual communication anxiety as a moderator and as a intervening variable for the associations between attachment anxiety and avoidance and the outcomes of relationship and sexual satisfaction. There has been one other study that has examined sexual communication anxiety as a mediator or intervening variable of these relationships, although this is the first one to examine the moderation relationship. More research on this topic could be especially helpful to couple's therapists who are helping people overcome difficulties concerning their sexual relationship. Although this may hold true, there is still much variance that is not accounted for in sexual communication anxiety (92%). Since this is a relatively new construct, there will likely be many other constructs to study before strong correlates to sexual communication anxiety are found.

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APPENDIX A

Inhibition of Need Expression, Sexual Communication Scale

Rate the degree that you agree with the following statements.

1= not at all

2=a little

3=neither agree nor disagree

4=quite a bit

5=very much

1. If I feel something needs to be changed about our sex life, I usually try to talk to my partner about it and try to improve things.
2. If I'm dissatisfied with something about our sex life, I don't hesitate to tell my partner.
3. It is easy for me to tell my partner what I need him/her to do to satisfy me sexually.
4. If we're having problems with sex, I tend to let them build up for a long time before I say anything.
5. I have trouble telling my partner if something about his/her sexual performance is bothering me.
6. I feel completely uninhibited about expressing my sexual desires to my partner
7. I'm not afraid to stand up for myself on sexual issues
8. I often pretend to be more interested in sex than I really am, in order to please or avoid hurting my partner.
9. Generally, I tend to be inhibited about talking about sex
10. I try not to let my partner see it if I'm not really interested in sex.
11. I feel completely comfortable with my sexuality.
12. If my partner is unhappy with our sex life, I would rather not know about it.
13. If anything about our sex life is bothering my partner, I prefer to hear about it even if it causes me distress.
14. I often feel afraid of my sexual feelings.
15. Generally, I tend to be inhibited about having sex.
16. Even when I'm really in the mood to have sex, I prefer to wait to let my partner initiate sex.
17. If I don't actually have an orgasm during intercourse, I usually pretend to have one.
18. If I want to have sex, I'm more likely to "hint" around that I'm interested instead of just asking outright.

APPENDIX B

Experiences in Close Relationships Scale

Use the scale below to rate the following statements regarding your relationships with those close to you.

- 1=not at all like me
- 2= a little like me
- 3= somewhat like me
- 4=usually like me
- 5= very much like me

1. I prefer not to show a partner how I feel deep down.
2. I worry about being abandoned.
3. I am very comfortable being close to romantic partners. (R)
4. I worry a lot about my relationships.
5. Just when my partner starts to get close to me I find myself pulling away.
6. I worry that romantic partners won't care about me as much as I care about them.
7. I get uncomfortable when a romantic partner wants to be very close.
8. I worry a fair amount about losing my partner.
9. I don't feel comfortable opening up to romantic partners.
10. I often wish that my partner's feelings for me were as strong as my feelings for him/her.
11. I want to get close to my partner, but I keep pulling back.
12. I often want to merge completely with romantic partners, and this sometimes scares them away.
13. I am nervous when partners get too close to me.
14. I worry about being alone.
15. I feel comfortable sharing my private thoughts and feelings with my partner. (R)
16. My desire to be very close sometimes scares people away.
17. I try to avoid getting too close to my partner.
18. I need a lot of reassurance that I am loved by my partner.
19. I find it relatively easy to get close to my partner. (R)
20. Sometimes I feel that I force my partners to show more feeling, more commitment.
21. I find it difficult to allow myself to depend on romantic partners.
22. I do not often worry about being abandoned. (R)
23. I prefer not to be too close to romantic partners.
24. If I can't get my partner to show interest in me, I get upset or angry.

25. I tell my partner just about everything. (R)
26. I find that my partner(s) don't want to get as close as I would like.
27. I usually discuss my problems and concerns with my partner. (R)
28. When I'm not involved in a relationship, I feel somewhat anxious and insecure.
29. I feel comfortable depending on romantic partners. (R)
30. I get frustrated when my partner is not around as much as I would like.
31. I don't mind asking romantic partners for comfort, advice, or help. (R)
32. I get frustrated if romantic partners are not available when I need them.
33. It helps to turn to my romantic partner in times of need. (R)
34. When romantic partners disapprove of me, I feel really bad about myself.
35. I turn to my partner for many things, including comfort and reassurance. (R)
36. I resent it when my partner spends time away from me.

APPENDIX C

Physical Satisfaction Scale

Rate the degree that you agree with the following statements.

1= not at all

2=a little

3=neither agree nor disagree

4=quite a bit

5=very much

1. Satisfied with the quality of sex in your relationship(s)
2. Satisfied with the physical enjoyment you get out of sex
3. Satisfied with the sexual skills of your partner
4. Satisfied with the emotional enjoyment you get out of sex
5. Satisfied with the sexual attractiveness of your partner
6. I am usually able to satisfy my sexual needs in my relationship
7. I always have orgasms when I have intercourse
8. I'm very easy to satisfy sexually
9. I would like to be able to get more physical satisfaction out of sex

10. I would like to be able to have more orgasms
11. I'm very easy to arouse sexually

