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Shying Away from Sex: Examining Fear of Negative Evaluation
and Body Esteem as Mediators in the Associations
Between Shyness and Sexuality

Carlie Grace Palmer

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of

Master of Science

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ABSTRACT

Shying Away from Sex: Examining Fear of Negative Evaluation and Body Esteem as Mediators in the Associations Between Shyness and Sexuality

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Master of Science

Researchers have examined how shyness influences broad aspects of relationships (i.e., quality, satisfaction); however, little is known about how shyness impacts sexuality, specifically, within committed relationships. This study examined associations between shyness and sexual frequency and sexual satisfaction within committed young adult relationships. Potential explanations for these associations (i.e., fear of negative evaluation and body esteem, consecutively) were also examined. Participants included 3,670 individuals (61.6% female) ages 30-35 from the United States who were in committed dating or marital relationships. Results revealed that shyness was negatively associated with sexual frequency and satisfaction among men and women. In addition, fear of negative evaluation via body esteem mediated these associations. The discussion considers the implications of shyness and the associated processes and sexual outcomes in young adulthood.

Keywords: shyness, sexuality, fear of negative evaluation, body esteem

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Shying Away from Sex: Examining Fear of Negative Evaluation and Body Esteem
as Mediators in the Associations Between Shyness and Sexuality

There is a small but growing body of research examining the influence of shyness on various facets of young adult life (e.g. Nelson, 2013; Nelson et al., 2008), including romantic relationships (Luster, Nelson, & Busby, 2013; Tackett, Nelson, & Busby, 2013). In particular, shyness seems to negatively influence aspects of committed relationships, including relationship satisfaction (Baker & McNulty, 2010; Shahrbabk & D'Souza, 2010; Tackett et al., 2013). However, researchers have not yet examined the influence of shyness on all aspects of committed relationships. Specifically, links between shyness and sexuality within committed adult relationships have not yet been explored. As the satisfaction experienced within one's sexual relationship plays an integral role in overall relationship satisfaction (Karney & Bradbury, 1995; Sprecher, 2002), it is imperative to understand factors that may negatively influence sexual relationships. Hence, the first purpose of this study was to examine the associations between shyness and indices of sexuality within marital and other committed relationships. Specifically, I examined these associations among young adult couples (ages 30-35), who, being engaged in relatively new committed relationships, may have yet to learn to navigate shyness in the sexual realm.

In an attempt to understand why shyness might be linked with these outcomes, this study also examined possible explanations (i.e., mediators) for the associations between shyness and aspects of the sexual relationship. Research suggests that shy individuals experience a heightened fear of negative evaluation (Miller, 2012; Nelson, 2013). It is possible that this amplified fear would be salient within a committed relationship, particularly in the sexual context, as individuals may fear their partner's potential negative evaluations. Further, fear of

negative evaluation in a sexual context may lead to diminished levels of body esteem.

Researchers have identified links between body esteem and indices of sexuality, including sexual desire (Seal, Bradford, & Meston, 2009), sexual assertiveness (Weaver & Byers, 2006), sexual functioning (Weaver & Byers, 2006), and sexual satisfaction (Hoyt & Kogan, 2001). Therefore, the second purpose of this study was to examine potential mediators (i.e., fear of negative evaluation and body esteem consecutively) in the associations between shyness and indices of sexuality (i.e., sexual frequency and sexual satisfaction) within committed young adult relationships.

In the limited research that has examined the influence of shyness on sexuality, clear gender differences have been identified (Luster, Nelson, Poulsen, & Willoughby, 2013). Additionally, although numerous studies have examined body esteem exclusively among women (e.g., Seal et al., 2009; Weaver & Byers, 2006; Werlinger, King, Clark, Pera, & Wincze, 1997), links between body esteem and sexuality have also been found among men (Hoyt & Kogan, 2001). Taken together, the final purpose of this study was to examine these associations as moderated by biological sex (i.e., hereafter referred to as gender or men and women).

Shyness

Numerous definitions of shyness exist in research, incorporating elements of social anxiety (Anderson & Harvey, 1988), behavioral inhibition (Coll, Kagan, & Reznick, 1984), introversion (Kwiatkowska & Rogoza, 2017), and self-conscious emotions (Luster, Nelson, & Busby, 2013), to name a few. The term “social withdrawal” has been used as an “umbrella construct” in order to capture various motivations for removing oneself from social situations (Rubin, Coplan, Bowker, & Menzer, 2011). An approach-avoidance model (Asendorpf, 1990, 1993) is useful in the examination of social withdrawal, as it accounts for various reasons why

individuals might withdraw from social interactions. In this model, shyness is one form of social withdrawal identified that is characterized by a high approach and high avoidance motivation (Asendorpf, 1990, 1993). This suggests that shy individuals have a strong desire for social interaction (high approach motivation) but simultaneously experience fear and anxiety in the face of that interaction (high avoidance motivation) (Asendorpf, 1990, 1993). This approach-avoidance conflict (i.e., shyness) has been linked with maladaptive internal and relational outcomes among children (e.g., Coplan, Prakash, O'neil, & Armer, 2004; Coplan & Rubin, 2010; Rubin, 1985), adolescents (e.g., Erath, Flanagan, & Bierman, 2007; Rubin, Bowker, Barstead, & Coplan, 2018), and emerging adults (e.g., Nelson 2013; Nelson et al., 2008).

Shyness in Adulthood

As shyness has been linked with negative correlates throughout much of the early lifespan, it is likely that its influence would continue into adulthood. Indeed, there is evidence, however limited, that shy adults also experience consequences associated with their temperament (e.g., Caspi, Elder, & Bem, 1988; Kerr, Lambert, & Bem, 1996; Luster, Nelson, & Busby, 2013; Tackett et al., 2013). The scant research that exists suggests that shyness may have a particularly salient influence on romantic relationships in adulthood, predicting later age of marriage (Caspi et al., 1988; Kerr et al., 1996), diminished couple communication (Luster, Nelson, & Busby, 2013), and lower levels of relationship satisfaction (Baker & McNulty, 2010; Luster, Nelson, & Busby, 2013; Shahrabak & D'Souza, 2010; Tackett et al., 2013). These findings exist within *committed* romantic relationships, despite there being reason to expect, as Baker and McNulty have pointed out (2010), that shy individuals would not experience “shyness” in the context of safe, established relationships. Research conducted using an emerging adult sample also suggested that shy individuals experience poorer relationship quality with romantic partners than

their non-shy peers (Nelson et al., 2008). So, not only do shy individuals take longer to enter into romantic relationships (e.g., marriage; Caspi et al., 1988), they also experience difficulties within them (e.g., Baker & McNulty, 2010).

It is possible that shyness would be especially influential among couples in young adulthood (i.e., the thirties), as this is the time when many shy individuals are making the transition into committed, long-term romantic relationships. Current trends suggest that the average age of first marriage in the United States is approaching 30 for men and 28 for women (U.S. Census Bureau, 2018). However, for shy individuals, the median age of first marriage is likely to be slightly older. Indeed, Caspi and his colleagues (1988) found that the average age of marriage for shy individuals was approximately three years later than for non-shy individuals. Aligning that research with current marriage trends, it is probable that the average age of marriage for shy individuals hovers around 33 for men and 31 for women. Hence, there is reason to believe that the early thirties are a pivotal time of relationship transitions for shy individuals. Thus, it is important to understand how shyness may influence various aspects of these new, developing committed relationships.

Shyness and Sexuality

Although shyness has been identified as a risk factor in broad aspects of romantic relationships (i.e., relationship quality, relationship satisfaction), less is known regarding the correlates of shyness in specific aspects of these relationships (e.g., sexuality). Indeed, research examining links between shyness and sexuality in any context is extremely limited. Leary and Dobbins (1983) were the first, to my knowledge, to examine these types of associations. Their research focused around social anxiety, which is related to but not synonymous with shyness (Schmidt & Buss, 2010). In their research, Leary and Dobbins (1983) found that socially anxious

college students engaged in less sexual activity and expressed more apprehension regarding sex than their non-anxious peers. Similarly, Kashdan and his colleagues (2011) found that social anxiety was linked to less pleasurable sexual encounters among college-age men and women, as well as lower frequency of sex among women. More recently, using a sample of non-married emerging adults, it was found that shy men were more likely to have permissive sexual attitudes and to engage in solitary sexual behaviors (e.g., pornography use), while shy women were less likely to engage in sexual intercourse and had fewer sexual partners, compared to their non-shy peers (Luster, Nelson, Poulsen et al., 2013). These findings among college-age samples suggest that shyness may be related to various aspects of sexuality, but research has yet to examine associations between shyness and indices of sexuality within older, committed relationships. Hence, the first purpose of this study was to examine the relations between shyness and aspects of the sexual relationship (i.e., sexual frequency and sexual satisfaction) in committed relationships among young adult couples (ages 30-35).

Theoretical Considerations

The Interpersonal Exchange Theory of Sexual Satisfaction (Lawrance & Byers, 1995) provides a lens through which we might understand the potential influence of shyness on sexuality. Within this theory, both the costs and the rewards of sexual intimacy are taken into account and the balance (or imbalance) of the two help to determine one's engagement in sexual behaviors (Sprecher, 2002). Costs are defined as the resources that one must offer in exchange for something else, typically resulting in loss or penalty (Sprecher, 1998). Rewards, on the other hand, are the resources received in the exchange that are deemed to be positive, such as pleasure (Sprecher, 1998). Theorists acknowledge that the summation of costs and rewards within the sexual relationship largely determine how satisfied an individual will be with said relationship

(Lawrance & Byers, 1995). Specifically, costs within the sexual context are negatively associated with sexual satisfaction, while rewards are positively associated with sexual satisfaction (Lawrance & Byers, 1995).

Although most individuals rate the rewards of sexuality as much higher than the costs (Lawrance & Byers, 1995), shy individuals may experience unique costs that complicate their sexual relationships. If shy individuals expect higher costs associated with sexual intimacy, they may be less likely to engage in sexual behaviors and may be less satisfied with intimacy when they do engage. Specifically, there are characteristics of shy individuals, including negative self-processes, that may make them more likely to perceive costs (e.g., negative evaluation, negative feelings of oneself) associated with sex that, in turn, impact aspects of their sexual relationship with their partner.

Shyness and Negative Self-Processes

In examining links between shyness and relational or sexual outcomes, it is important to explore possible explanations for these associations. Scholars have uncovered a few explanations for the connections between shyness and relationship satisfaction. Specifically, Baker and McNulty (2010) reported that shy individuals experienced lower levels of relationship self-efficacy, leading to increased levels of marital problems. These problems, in turn, predicted lower levels of overall relationship satisfaction. This suggests that shy individuals may struggle to view themselves as capable in various situations within their relationships. Another study examined self-esteem as a potential mediator in the association between shyness and relationship satisfaction (Tackett et al., 2013). Results from this study suggested that shyness was associated with lower levels of self-esteem which, in turn, led to decreased relationship satisfaction. Results from both studies begin to establish an important pattern—shy individuals seem to struggle with

feeling that they are good enough, both as a person and as a partner. In sum, negative views of the self, often found among shy individuals, may help to explain the associations between shyness and relational outcomes, generally, and, therefore, may also play a role in the link between shyness and sexual outcomes specifically.

Fear of Negative Evaluation and Body Esteem

Sexually intimate relationships may be a setting in which negative self-processes are particularly salient. Indeed, negative self-processes may be perceived as “costs” within the sexual content. One such self-process is the fear of negative evaluation, which is a heightened concern with the critical judgements of others (Leary, 1983). Fear of negative evaluation becomes prevalent in adolescence (Miller, 2012), as individuals in this age group are developmentally able to reflect on and internalize the evaluations of their peers (Harter, 2012). It has repeatedly been shown that shy individuals experience a heightened fear of negative evaluation, compared to non-shy peers (Koydemir-Özden & Demir, 2009; Nelson, 2013), which seems to develop over time as a result of negative social experiences. Individuals who experience this heightened fear are more likely to avoid situations that put them in a position to be judged by others (Leary, 1983), perhaps because they perceive the costs to the self as outweighing the benefits of interaction. In avoiding interactions that may elicit negative evaluations, shy individuals circumvent the feelings of rejection that they assume will follow negative evaluations (Zimbardo, 1986). Within a sexually intimate relationship, there are various elements that may be perceived as opportunities for negative evaluation (e.g., sexual performance, physical appearance). Those who are shy may be particularly uncomfortable in this expressly vulnerable situation, given their fear of the negative judgement of their partner. In sum,

the potential negative evaluations of one's partner may be perceived by shy individuals as a high cost of sexual intimacy, which may influence sexual engagement.

This perceived cost of sexuality (i.e., fear of negative evaluation) may be problematic, as it could potentially lead to lower levels of body esteem. Indeed, researchers have linked fear of negative evaluation and body esteem in previous research (Dunaev, Schulz, & Markey, 2018; McClintock & Evans, 2001). Body esteem, or an individual's perceived attractiveness and approval of his or her physical appearance, may be compromised among shy individuals who experience a heightened fear of negative evaluation. Fear of negative evaluation may cause individuals to hyper focus on flaws in personal appearance and sexual performance, leading to lower levels of body esteem. In turn, struggles with body esteem are likely to influence one's sexual experience with a partner, as seen in previous research (Weaver & Byers, 2006; Wiederman, 2000). Specifically, Wiederman (2000) reported that, among a sample of 209 college-age women, body image self-consciousness predicted lower levels of sexual esteem, sexual assertiveness, and sexual activity. Similarly, among a similar sample, Weaver and Byers (2006) found that body dissatisfaction was associated with low sexual assertiveness and sexual esteem and with high sexual anxiety. Lower levels of body esteem associated with sexual intimacy may, similar to fear of negative evaluation, be interpreted by shy individuals as a cost of engaging in sexual behavior, motivating them to avoid sexual interactions. In sum, fear of negative evaluation would likely lead to decreased levels of body esteem, which would in turn influence the sexual relationships of shy individuals. Taken together, the second purpose of this study was to examine the mediating roles of fear of negative evaluation and body esteem in the associations between shyness and sexual outcomes (i.e., sexual frequency and sexual satisfaction) within committed relationships.

The Role of Gender

As significant gender differences have been prevalent in research examining both shyness and sexuality as well as in negative self-processes associated with body esteem, it is critical to examine gender differences in the current study. Regarding the associations between shyness and sexuality, it has been found that shyness was linked to having fewer sexual partners and engaging in less relational sexual behavior among college-age women (Luster, Nelson, Poulsen et al., 2013). However, among the men in the study, no significant associations were found between shyness and relational sexual behaviors. It is possible, as suggested by Lawrance and Byers (1995), that women experience more costs when engaging in sexuality than do men, or experience similar costs but with more intensity. Social anxiety, similar to shyness, has been linked with having fewer sexual encounters for women, as well as lower levels of pleasure experienced during sex for men and women (Kashdan et al., 2011). Thus, shyness may be more salient in predicting sexual behaviors (e.g., sexual frequency) for women than for men, but likely impacts sexual pleasure or sexual satisfaction among both men and women.

Although gender differences are likely prevalent in the associations between shyness and sexual behaviors, differences between men and women in the realm of fear of negative evaluation and body esteem may not be as prevalent. Researchers have often studied body esteem among women exclusively (Dunaev et al., 2018; McClintock & Evans, 2001; Weaver & Byers, 2006; Wiederman, 2000), arguing that women are more commonly the victims of objectification (Fredrickson & Roberts, 1997) and, therefore, experience struggles with body esteem more frequently than men. However, there has been an increase in the objectification of men and the establishment of the ideal muscular physique over time (Leit, Pope Jr, & Gray, 2001), providing one explanation for the rise in body dissatisfaction among men (Dakanalis &

Riva, 2013; Obeid et al., 2017). Further, Tackett and her colleagues (2013) reported that shyness was negatively associated with self-esteem for both men and women. In this case, the researchers were examining overall self-esteem, rather than body esteem, but these two variables are highly correlated (Olenik-Shemesh, Heiman, & Keshet, 2018). Hence, there is reason to believe that men, as well as women, are vulnerable to struggles with body esteem, particularly those with a heightened fear of negative evaluation (e.g., shy individuals). Therefore, the final purpose of this study is to examine all associations among groups of men and women.

Current Study

Shyness has been established as a risk factor in relationship satisfaction (Baker & McNulty, 2010; Shahrabak & D'Souza, 2010; Tackett et al., 2013) and relationship quality (Nelson et al., 2008) in romantic relationships. It has also been linked to differences in sexual behavior among college students (Luster, Nelson, Poulsen et al., 2013). Further, researchers have found that negative self-processes help to explain associations between shyness and relational outcomes (Baker & McNulty, 2010; Tackett et al., 2013). This would likely also be the case in the associations between shyness and sexual relationships, specifically in regard to the heightened fear of negative evaluation experienced by shy individuals (Nelson, 2013). This fear of negative evaluation may lead to decreased levels of body esteem which, in turn, may negatively impact aspects of sexuality within committed relationships. Taken together, there is a need to examine the direct and indirect (via fear of negative evaluation and body esteem) associations between shyness and various aspects of sexual relationships within committed adult relationships. Hence, the purposes of this study were (a) to examine the influence of shyness on aspects of the sexual relationship (i.e., sexual frequency and sexual satisfaction) within committed young adult relationships, (b) to examine the mediating roles of fear of negative

evaluation and body esteem in the associations between shyness and sexual outcomes, and (c) to examine these associations by gender.

Given that shyness has been linked with lower levels of relational sexual behavior among college age women (Luster, Nelson, Poulsen et al., 2013), it was hypothesized that shyness would predict lower levels of sexual frequency among women in the sample. As the associations between shyness and sexual behaviors were not present among college-age men (Luster, Nelson, Poulsen et al., 2013), it was hypothesized that shyness would not predict differences in sexual frequency among men in the sample. However, because shyness has been linked to lower levels of relationship satisfaction (Baker & McNulty, 2010; Shahrabak & D'Souza, 2010; Tackett et al., 2013) and relationship quality (Nelson et al., 2008) in romantic relationships for both genders, it was hypothesized that shyness would predict lower levels of sexual satisfaction among both men and women. Further, it was expected that fear of negative evaluation via body esteem would at least partially explain the associations between shyness and the aforementioned sexual outcomes, based on research examining links between shyness and fear of negative evaluation (Koydemir-Özden & Demir, 2009; Nelson, 2013), as well as those between fear of negative evaluation and body esteem (Dunaev et al., 2018; McClintock & Evans, 2001). Finally, it was hypothesized that the mediating influences of fear of negative evaluation and body esteem would be found among both men and women in the sample, as research has suggested that both genders may be vulnerable to fear of negative evaluation (Trompeter et al., 2018) and struggles with body satisfaction (Dakanalis & Riva, 2013; Dunaev et al., 2018; McClintock & Evans, 2001; Obeid et al., 2017).

Methods

Procedure

Participants for the study were recruited using a simple random sampling approach of 30 to 35-year-olds in the United States. Participants were weighted by gender, racial, and ethnic distributions, and other demographic characteristics. The sample was identified by and administered an online survey by YouGov. Participants were compensated in reward credits via the YouGov system.

Participants

Participants in this study included 3,670 individuals (61.6% female) ages 30-35 ($M_{age} = 32.50$, $SD = 1.70$) from the United States who were married or in a committed relationship (i.e., exclusively dating one person, engaged, married and living with spouse, domestic partnership). The sample varied in terms of race (73.1% White, 9.0% Black, 9.5% Hispanic, 3.3% Asian, 4.9% Other) and sexual orientation (90.0% heterosexual, 5.1% bisexual, 1.6% gay, 1.3% lesbian, 2.4% other or unidentified), and included participants from all 50 states and Washington D.C. There was also a wide range of educational attainment (14.8% graduate degree, 25.9% undergraduate, 12.5% associates/ 2-year, 24.8% some college, 19.2% high school, 2.8% no high school diploma), current work situation (55.7% working full-time, 11.7% part-time, 19% homemakers, 5.8% unemployed, 2.8% disabled, 2.9% students, 0.6% laid off), and household income (8.8% household income under \$20k, 39.4% between \$20-\$60k, 29.9% between \$60-\$100k, 20% over \$100k). In terms of family composition (among those in a committed relationship), there was also diversity (13.7% exclusively dating one person, 8.4% engaged, 70.4% married, 7.5% domestic partnership), living situation (87.7% living with spouse/partner, 3.6% alone, 4.5% with parents, 2% with friends, 3.5% with other family), and number of

children (29% no children, 20.4% one child, 28.7% two children, 13.5% three children, 8.3% four or more).

Measures

Shyness. To assess shyness, participants completed a revised version of the Child Social Preference Scale (CSPS) (Coplan et al., 2004). Three of the original six shyness items were included in this study and participants responded to each item on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Questions included, “I’d like to hang out with other people, but I’m sometimes nervous to,” “Although I desire to talk to and be with other people, I feel nervous about interacting with them,” and “I tend to be shy.” Cronbach’s $\alpha = .82$.

Fear of negative evaluation. To assess fear of negative evaluation, participants completed a revised version of the s. Two of the original twelve items were included in this study and participants responded to each item on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Questions included, “When I am talking to someone, I worry about what he or she may be thinking about me” and “I am afraid others will not approve of me.” Cronbach’s $\alpha = .83$.

Body esteem. To assess body esteem, participants completed a revised version of the Body Esteem Scale for Adolescents and Adults (BESAA) (Mendelson, Mendelson & White, 2001). Five of the original 10 items (appearance subscale) were included in this study and participants responded to each item on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Questions included, “I believe that I am a physically attractive person,” “I like what I see when I look in the mirror,” “There are lots of things I’d change about my looks if I could” reverse coded, “I’m pretty happy about the way I look,” and “I worry about the way I look” reverse coded. Cronbach’s $\alpha = .85$.

Sexual frequency. To assess sexual frequency, participants were asked “About how often do you currently have sex with your partner?” Participants responded to this item on an 8-point scale, responses included 1 (never), 2 (less than once a month), 3 (once to three times a month), 4 (about once a week), 5 (two to four times a week), 6 (five to seven times a week), and 7 (more than once a day).

Sexual satisfaction. To assess sexual satisfaction, participants completed five of the six sexual satisfaction items from the RELATE study (Busby, Holman, & Taniguchi, 2001). Participants responded to each item on a 5-point scale ranging from 1 (never) to 5 (very often). Questions included, “Are you satisfied with the amount of time you and your partner spend on foreplay?” “Do you feel there is a lack of love and affection in your sexual relationship?” reverse coded, “Are you dissatisfied with the amount of variety in your sex life with your partner?” reverse coded, “Do you find the sexual relationship with your partner satisfactory?” and “Do you feel dissatisfied with the amount of time your partner spends on intercourse itself?” reverse coded. Cronbach’s $\alpha = .78$.

Gender. Gender was measured by asking participants to report their gender with 1 (male) and 2 (female) as the provided answers.

Control variables. Age, race, education, religious attendance, and relationship status were included as controls in each analysis. Each of these was composed of a single item. Age was measured by asking participants to signify their birth year. Race was measured by asking participants to report their race/ethnicity. Education was measured by asking participants, “How much education have you completed?” with responses ranging from 1 (less than high-school) to 8 (graduate or professional degree). Religious attendance was measured by asking participants “How often do you attend religious services?” with responses ranging from 1 (never) to 5

(weekly). Relationship status was measured by asking participants “What is your relationship status?”

Analysis Plan

Descriptive statistics were computed for all variables included in the study. A correlation matrix was included, examining relationship between all variables of study among female participants and male participants. To examine associations between shyness and sexual outcomes (i.e., sexual frequency and sexual satisfaction), as well as the mediating effects of fear of negative evaluation via body esteem, structural equation modeling (SEM) was employed using Mplus version 8 (Muthén & Muthén, 2017). Two structural equation models were conducted. The first model examined direct associations between shyness and sexual outcomes among groups of men and women. The second model examined the mediating role of fear of negative evaluation via body esteem among groups of men and women. Age, race, education, religious attendance, and relationship status were included as controls in each SEM. Prior to running the models, confirmatory factor analyses were conducted to determine whether sexual frequency and sexual satisfaction were distinct constructs or simply facets of one larger construct.

Results

Descriptive Statistics

Frequencies revealed that 47% of individuals in the sample reported experiencing some level of shyness (mean score greater than 3), with approximately 15% experiencing a more extreme level of shyness (mean score greater than 4). Means and standard deviations for all variables of study are included in Table 1. Bivariate correlations were conducted between all variables of study among all participants combined (Table 2) and among men and women

separately (Table 3). Of note, among the combined sample, shyness was positively correlated with fear of negative evaluation ($r = .68, p < .001$) and negatively correlated with body esteem ($r = -.33, p < .001$), sexual frequency ($r = -.08, p < .001$), and sexual satisfaction ($r = -.16, p < .001$). Further, fear of negative evaluation was negatively correlated with body esteem ($r = -.47, p < .001$). Body esteem was positively correlated with sexual frequency ($r = .19, p < .001$) and sexual satisfaction ($r = .25, p < .001$).

Factor Analysis

Prior to running the full model, a confirmatory factor analysis (CFA) was conducted to determine if the selected measures of sexuality were, in fact, two separate constructs, or whether they represent parts of one larger factor. Results of the CFA suggested that sexual frequency and sexual satisfaction do load together on a single factor, with the lowest factor loading (i.e., sexual frequency) being .45. While sexual frequency and sexual satisfaction are empirically correlated, they are conceptually distinct in ways that may be important to the understanding of how shy individuals interact sexually within committed relationships. Specifically, it is important to understand if shyness is influencing sexual behaviors (e.g., frequency), the enjoyment of those behaviors (e.g., satisfaction), or both. If frequency and satisfaction were to be combined, the nuances of these associations would be muddled. Therefore, I decided to include sexual frequency and sexual satisfaction in the analyses as individual constructs.

Model 1: Direct Effects of Shyness on Sexuality

The first purpose of this study was to examine the influence of shyness on sexuality within committed, young adult relationships. In order to examine direct associations between shyness and sexual outcomes (i.e., sexual frequency and sexual satisfaction), structural equation modeling (SEM) was employed using Mplus version 8 (Muthen & Muthen, 2017).

Measurement model. First, a measurement model was conducted. Latent variables were created for shyness and sexual satisfaction, with all factor loadings at or above .50. Model fit was considered acceptable with a CFI > .90 and a RMSEA < .08 (Little, 2013). The model fit the data well, $X^2(21) = 101.59$, $p < .001$, RMSEA = .03, CFI = .99, TLI = .99.

Structural model. Next, shyness was established as an exogenous variable, with the three measures of sexuality included as endogenous variables (Figure 1). Age, race, education, religious attendance, and relationship status were all included as control variables. Multiple group analyses were used to examine these associations among men and women.

The default model, wherein all structural paths were constrained to be equal for men and women, was compared to a model in which all paths were freely estimated across gender groups. An insignificant chi-square difference test between the unconstrained and constrained models, $X^2(10) = 14.48$, $p = .15$, suggested that the model functions similarly for men and women. Thus, in the final model I constrained all paths to be equal across groups. This final model, from which I interpreted coefficients, had good model fit, $X^2(112) = 331.88$, $p < .001$, RMSEA = .05, CFI = .96, TLI = .94.

Results for men and women indicated that shyness was negatively associated with sexual frequency and sexual satisfaction (Table 4). The overall squared multiple correlations for sexual frequency among the participants in the sample was $R^2 = 0.02$, meaning that the model explained 2% of the variance in sexual frequency. The variables in the model explained approximately 5% of the variance in sexual satisfaction ($R^2 = 0.05$).

Model 2: Indirect Effects of Shyness on Sexuality

The second purpose of this study was to examine the mediating roles of fear of negative evaluation and body esteem in the associations between shyness and sexual outcomes (i.e.,

sexual frequency and satisfaction). In order to examine these associations, structural equation modeling (SEM) was again employed using Mplus version 8 (Muthen & Muthen, 2017).

Measurement model. First, a measurement model was conducted. Latent variables were created for shyness, fear of negative evaluation, body esteem, and sexual satisfaction, with all factor loadings at or above .49. Model fit was considered acceptable with a CFI > .90 and a RMSEA < .08 (Little, 2013). The model fit the data well, $X^2(85) = 711.57, p < .001$, RMSEA = .05, CFI = .98, TLI = .97.

Structural model. Next, shyness was established as an exogenous variable, with the three measures of sexuality included as endogenous variables. Fear of negative evaluation and body esteem were included in the model as mediators, consecutively (Figure 2). Age, race, education, religious attendance, and relationship status were all included as control variables. Multiple group analyses were used to examine these associations among groups of men and women. I used maximum likelihood bootstrapping with a 95% confidence interval to extract 2000 bootstrap samples in order to test the mediating relationships and to obtain significance levels for the direct and indirect effects.

The default model, wherein all structural paths were constrained to be equal for men and women, was compared to a model in which all paths were freely estimated across gender groups. A significant chi-square difference test between the unconstrained and constrained models, $X^2(28) = 138.69, p < .001$, suggested that the model functions differently for men and women. I proceeded to test paths individually to determine which associations differed by gender. These subsequent tests revealed that seven paths in the model varied as a function of gender. Specifically, the associations between shyness and body esteem and between fear of negative evaluation and body esteem varied by gender, along with five associations between control

variables and main variables of study (Table 5). The paths that did not vary between men and women (Table 5) were constrained to be equal in the final model. The resulting model fit the data well, $X^2(298) = 1400.88$, $p < .001$, RMSEA = .05, CFI = .96, TLI = .95.

Results for men and women (Table 5) indicated that shyness was positively associated with fear of negative evaluation which was, in turn, was negatively associated with body esteem. Body esteem was positively associated with sexual frequency and sexual satisfaction. Total indirect effects (Table 6) indicated that shyness (via fear of negative evaluation and body esteem) was negatively associated with sexual frequency and sexual satisfaction for males and females. The overall squared multiple correlations for sexual frequency among the men in the sample was $R^2 = 0.03$, meaning that the variables in the model accounted for 3% of the variance in sexual frequency. The variables in the model explained approximately 11% of the variance in sexual satisfaction among men ($R^2 = 0.11$). The overall squared multiple correlations for sexual frequency among the women in the sample was $R^2 = 0.04$, meaning that the variables in the model accounted for 4% of the variance in sexual frequency. The variables in the model explained approximately 10% of the variance in sexual satisfaction ($R^2 = 0.10$).

Discussion

The purposes of this study were (a) to examine the influence of shyness on aspects of the sexual relationship (i.e., sexual frequency and sexual satisfaction) within committed young adult relationships, (b) to examine the mediating roles of fear of negative evaluation and body esteem in the associations between shyness and sexual outcomes, and (c) to examine these associations by gender. Results revealed that (a) shyness was negatively associated with sexual frequency and sexual satisfaction among men and women, and (b) fear of negative evaluation and body esteem

mediated the associations between shyness and sexual outcomes for both genders. Results accompanying each hypothesis will be discussed in turn.

Direct Effects of Shyness on Sexuality

First, it was hypothesized that shyness would predict lower levels of sexual frequency among women in the sample, but would not predict sexual frequency among men. The results of the study only partially supported this hypothesis, revealing that shyness was associated with lower levels of sexual frequency among both men and women. As noted previously, shyness has been linked to lower levels of relational sexual behavior among college-age women, but not among men in the same demographic (Luster, Nelson, Poulsen et al., 2013). The current study supports these findings, in that shyness was again linked with less engagement in sexual behaviors among women. However, the previously identified pattern that shyness does not influence sexual frequency among men (Luster, Nelson, Poulsen et al., 2013) was not supported by the current study. Indeed, results of the current study indicated that there were no differences between men and women in the association between shyness and sexual frequency because, instead, *both* experienced a lower level of sexual frequency associated with shyness.

The second hypothesis was that shyness would predict lower levels of sexual satisfaction among both men and women in the sample. This hypothesis was supported, as results revealed negative associations between shyness and sexual satisfaction for both genders. These results extend the previous literature, suggesting that, although some research suggests that the influence of shyness on sexuality is more salient for women than men (Luster, Nelson, Poulsen et al., 2013), neither gender is immune from the influence of their shy motivations on sexuality. Further, the current study is the first to examine sexual behaviors (i.e., frequency) and satisfaction among shy young adults. By focusing exclusively on young adults within committed

dating or marital relationships, results of the current study provide evidence that the impact of shyness on sexuality persists, not only in the exploration phase (i.e., emerging adulthood) of meeting potential partners and dating, but also in committed young adult relationships.

Only a little more will be discussed regarding the direct effects given that subsequent mediational analyses will account for, or explain, many of the direct effects. Indeed, after the mediators (i.e., fear of negative evaluation and body esteem) were taken into account, the direct associations between shyness and sexual frequency and sexual satisfaction were no longer significant. However, it is important to note that these initial direct effects point to the fact that the influence of shyness is salient even within committed relationships. In previous research, shy individuals have reported less fear or anxiety when interacting with familiar persons than with strangers (Arkin & Grove, 1990). In fact, participants in Arkin and Grove's study were just as likely as their non-shy peers to interact with those who were familiar to them. In the context of committed adult relationships, it might be assumed that the influence of shyness would be diminished by the intimate and familiar nature of the relationship. However, the current study adds to a growing body of research (e.g., Baker & McNulty, 2010) that suggests that shyness is still salient within committed romantic relationships. In sum, shy individuals experience maladaptive outcomes associated with their fearful temperament, even among individuals with whom they are very close, specifically their committed romantic partners.

The notion that the familiarity of a spouse may not change the fact that shyness has the potential to affect relationships is important. It adds to a growing body of evidence that shy individuals may not be able to open up, or be vulnerable, in relationships regardless of their level of familiarity. As mentioned previously, shy individuals tend to struggle with aspects of communication (i.e., empathy and self-disclosure), which in turn predict lower levels of

relationship satisfaction (Luster, Nelson, & Busby, 2013). This suggests that they tend to be guarded in aspects of communication that require one to open up emotionally. Likewise, the intimacy involved in being sexual with a partner also requires one to be vulnerable. Hence, taken together, the findings point to the fact that shy individuals may struggle in being vulnerable which leads to the question of why this may be the case.

It is very possible that the answer can be found in the way shy individuals may see possible threats, or costs, to aspects of the self. Indeed, in examining the associations between shyness and sexuality through the lens of Interpersonal Exchange Theory of Sexual Satisfaction (Lawrance & Byers, 1995), one can assume that the influence of shyness on sexual frequency and satisfaction may reflect a perceived higher cost of being sexually intimate on one's sense of self. Researchers have identified self-esteem as a mediator in the associations between shyness and relationship satisfaction (Tackett et al., 2013). Shyness predicts lower levels of self-esteem, which negatively impact relationship satisfaction suggesting that a sense of self plays an important role for shy individuals and their relationships. As such, because the balance (or imbalance) of the costs and rewards of sexuality largely determine one's engagement in sexual behaviors and the enjoyment of said behaviors (Lawrance & Byers, 1995), it may be that shy individuals engage in sexuality less and enjoy it less because they are particularly worried about potential costs to the self. In other words, if shy individuals perceive threats, or costs, to their sense of self they may be less likely to engage in behaviors that leave them vulnerable such as in engaging in certain forms of communication (e.g., self-disclosure, Luster, Nelson, Poulsen et al., 2013), and, relevant for my findings, in participating in and enjoying sex. Indeed, this is why it was important to move beyond the direct effects and attempt to understand the potential

mediating roles of fear of negative evaluation and body esteem as potential costs of sexual engagement.

Indirect Effects of Shyness on Sexuality

The final hypothesis of the current study was that fear of negative evaluation via body esteem would at least partially explain the associations between shyness and sexual outcomes among both men and women. The results also supported this hypothesis, revealing that fear of negative evaluation and body esteem mediated the associations between shyness and sexual frequency and sexual satisfaction for both men and women. In other words, the lower levels of sexual frequency and satisfaction found among shy individuals are explained by fear of negative evaluation and body esteem.

These results support previous literature which has identified negative self-processes as mediators (e.g., low self-esteem) in the associations between shyness and negative relational outcomes (e.g., Baker & McNulty, 2010; Tackett et al., 2013). However, these existing studies examined the influence of negative self-processes in the associations between shyness and broad aspects of relationships, such as relationship satisfaction. The current study extends the current literature by identifying that these same patterns (i.e., the influence of negative self-processes) exist in the associations between shyness and sexuality, specifically.

Results from this study suggest that fear of negative evaluation is particularly salient within the sexual relationship. In the context of sexual intimacy, there are a myriad of things that may be perceived by shy individuals as opportunities for negative evaluation from their partner (e.g., physical appearance, sexual performance). This raises the stakes of sexuality for these individuals, as engaging in sexual behaviors subjects them to possible judgement and rejection. Seen through the lens of the Interpersonal Exchange Theory of Sexual Satisfaction (Lawrance &

Byers, 1995), the potential for negative evaluation may be perceived as a cost (Sprecher, 2002) of engaging in sexual behaviors. The influence of this fear on body esteem may also represent a potential cost of sexuality for shy individuals.

Results from this study suggest that fear of negative evaluation predicts lower levels of body esteem, supporting previous research that has linked the two (Dunaev et al., 2018; McClintock & Evans, 2001). One explanation for this association is that the fear of negative evaluation may cause individuals to hyper focus on their physical appearance, perhaps specifically on the flaws. Indeed, individuals who focus excessively on their bodies have been found to experience lower body image (Beach, 1993). The potential for decreased levels of body esteem, similar to the potential for negative judgement from their partner, may be interpreted by shy individuals as an additional cost of engaging in sexual behaviors with their partner. The combination of these costs seems to provide motivation for shy individuals to avoid engaging in sexual behaviors and, when they do choose to engage, hinder their overall enjoyment and satisfaction.

These findings are particularly meaningful for individuals who are shy or are in a committed relationship with a shy partner. The body of literature examining the influence of shyness on romantic relationships (e.g., Baker & McNulty, 2010; Luster, Nelson, & Busby, 2013; Shahrabak & D'Souza, 2010; Tackett et al., 2013) paints a rather dismal picture of what romance will be like for those who are shy. However, though the current study also suggests that shy individuals may struggle in aspects of the romantic relationship (i.e., sexuality), the mediating influence of fear of negative evaluation via body esteem found in this study provides a key as to how shy individuals can overcome the influence of their temperament in this area of their relationships. Fear of negative evaluation and body esteem are cognitions that are malleable

and, with practice, shy individuals may be able to learn valuable skills to address these types of negative cognitions, thus diminishing the influence of their temperament on their sexual lives.

The fact that the mediating influences of fear of negative evaluation via body esteem were significant among men and women is meaningful, as much of the research examining body esteem in general (Dunaev et al., 2018; McClintock & Evans, 2001) as well as that examining the influences of body esteem on sexuality (Weaver & Byers, 2006; Wiederman, 2000) has been conducted using samples made up primarily of women. Researchers have more recently argued that body esteem affects men in a similar manner (Dakanalis & Riva, 2013; Obeid et al., 2017). Struggles with body esteem among men might be particularly apparent among those who are shy, whose fear of negative evaluation likely fuels subsequent negative views of their body. Indeed, results from the current study suggest that, for both men and women, shyness positively predicts fear of negative evaluation, which was in turn associated with lower level of body esteem.

The current study adds to the growing evidence that body esteem influences sexuality (e.g., Weaver & Byers, 2006; Wiederman, 2000), while also adding to this literature by showing that associations exist between body esteem and sexuality, not only for women, but for men as well, and by providing insight into which individuals (i.e., shy) might be particularly vulnerable to body esteem struggles. Men and women who are shy comprise one group that, as a result of their heightened fear of negative evaluation, may be at an increased risk for low body esteem. This makes these individuals more susceptible to struggles in their sexual relationships than their non-shy peers.

The fact that these associations were found among both men and women provides important information for partners and practitioners alike. One should not assume that, simply

because a certain shy individual is a man, he will not experience lower levels of body esteem and associated struggles in his sexual relationship. Partners and practitioners can help by being sensitive to the experiences (e.g., thoughts/cognitions, feelings, behaviors) of shy individuals within sexually intimate relationships, including possible experiences with fear of negative evaluation and struggles with body esteem.

Summary

In sum, previous research has identified shyness as a potential risk factor in broad aspects of romantic relationships, predicting later entry into relationships (Caspi et al., 1988), lower levels of relationship quality (Nelson et al., 2008), and lower levels of relationship satisfaction (Baker & McNulty, 2010; Shahrabak & D'Souza, 2010; Tackett et al., 2013). The current study builds on the existing literature by providing information on how shyness impacts one specific aspect of romantic relationships (i.e., sexuality), which may provide one possible explanation as to why shy individuals tend to struggle in the broad aspects of their relationships (e.g., relationship quality, relationship satisfaction). Indeed, previous research has found that sexuality plays a key role in determining relationship stability and overall relationship satisfaction (Karney & Bradbury, 1995; Sprecher, 2002). For shy individuals, their struggles to engage in and enjoy the sexual relationship with their partner may at least partially explain why they experience lower levels of overall relationship quality and satisfaction.

Limitations and Future Directions

Despite its meaningful contributions to the field, this study is not without weaknesses. First, although inferences were made regarding the direction of effects in the association of the variables in this study (e.g., fear of negative evaluation predicting body esteem), definitive conclusions regarding direction of effects cannot be made as the data used in this study are cross-

sectional. Future research using longitudinal data is needed in order to understand the associations examined in this study more definitively. Second, while the sample used in this study is nationally representative, it is certainly not globally so. Hence, one cannot infer that these results would be consistent across different peoples and cultures. Future research can examine the influence of shyness on sexuality in other parts of the world and among religious and ethnic subgroups within the United States. Additionally, relationship length may be an important factor when considering how much one's shyness influences sexual behavior and satisfaction. However, the dataset utilized in the current study did not include a measure of relationship length. Future research should account for relationship length in analyses examining these factors.

Another limitation of the current study lies in the amount of variance explained by the variables of study. Although results did suggest that shyness was associated with lower levels of sexual frequency and sexual satisfaction for women and lower levels of sexual satisfaction for men, it should be taken into consideration that the amount of variance explained was minimal. Clearly, there are a variety of factors that influence these types of sexual outcomes, and personality traits, such as shyness, are simply part of a much larger puzzle. The same idea applies to the mediating influences of fear of negative evaluation and body esteem. Thus, readers should be careful in their interpretation and application of the results.

Conclusion

Notwithstanding the existence of these limitations, the current study makes several meaningful contributions to the growing body of research examining the influence of shyness on romantic relationships. The findings suggest that shyness predicts lower levels of sexual frequency and sexual satisfaction among young adult men and women in committed

relationships. In addition, results indicated that fear of negative evaluation and body esteem explain these links. In sum, shyness may put young adults at risk for struggles in their sexual relationships, due in large part to their experiences with fear of negative evaluation and body esteem.

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Appendix

Table 1. Descriptive Statistics for All Continuous Variables of Study

	Range	Mean (M)	SD (M)	Mean (F)	SD (F)
Age	30-35	32.59	1.66	32.48	1.67
Education	1-6	4.00	1.47	3.75	1.42
Religious Attendance	1-7	4.00	1.70	4.42	1.67
Shyness	1-5	2.77	1.14	3.07	1.14
Fear Neg Eval	1-5	2.73	1.23	3.10	1.22
Body Esteem	1-5	3.39	.81	3.02	.91
Sexual Frequency	1-7	4.06	1.39	3.87	1.39
Sexual Satisfaction	1-5	3.53	.84	3.62	.86

Note: M, male; F, female

Table 2. Bivariate Correlation Among Main Variables of Study

	1	2	3	4	5	6
1. Shyness	-					
2. Fear Neg Eval	.68**	-				
3. Body Esteem	-.33**	-.47**	-			
4. Sexual Frequency	-.08**	-.10**	.19**	-		
5. Sexual Satisfaction	-.16**	-.20**	.25**	.40**	-	
6. Gender	.13**	.15**	-.20**	-.07**	.05*	-

* $p < .01$, ** $p < .001$

Table 3. Bivariate Correlation Among Main Variables of Study by Gender

	1	2	3	4	5
1. Shyness	-	.70**	-.30**	-.05	-.15**
2. Fear Neg Eval	.66**	-	-.43**	-.08**	-.21**
3. Body Esteem	-.32**	-.46**	-	.21**	.26**
4. Sexual Frequency	-.09**	-.09**	.17**	-	.40**
5. Sexual Satisfaction	-.17**	-.20**	.27**	.41**	-

Note: Males above the diagonal, females below the diagonal

* $p < .01$, ** $p < .001$

Table 4. Direct Associations Between Shyness and Sexual Outcomes

	Frequency	Satisfaction
	β	β
Shyness	-.09***	-.21***
Race	-.002	-.05
Education	-.05*	.03
Religious Attendance	-.07**	-.05
Relationship Status	-.02	-.08**

Note: All paths constrained to be equal across gender groups

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 5. Indirect Associations Between Shyness and Sexual Outcomes

	Frequency	Satisfaction	Fear Neg Eval	Body Esteem
<i>Predictors</i>	β	β	β	β
Shyness	-.04	.02	.81***	.19**(.17***)
Fear Neg Eval	.01	-.18**	-	-.57***(-.61***)
Body Esteem	.15***	.20***	-	-
Race	-.01	-.05**	.01(-.07***)	.03(.04*)
Education	-.06***	.02	.02	.03(.10***)
Religious Attendance	-.06**	-.05**	.004	-.13***(-.08***)
Relationship Status	.01	-.04*	.01	-.01(-.02)

Note: Males before parenthesis, females within parenthesis

Paths with just one number were constrained to be equal

* $p < .05$, ** $p < .01$, *** $p < .001$

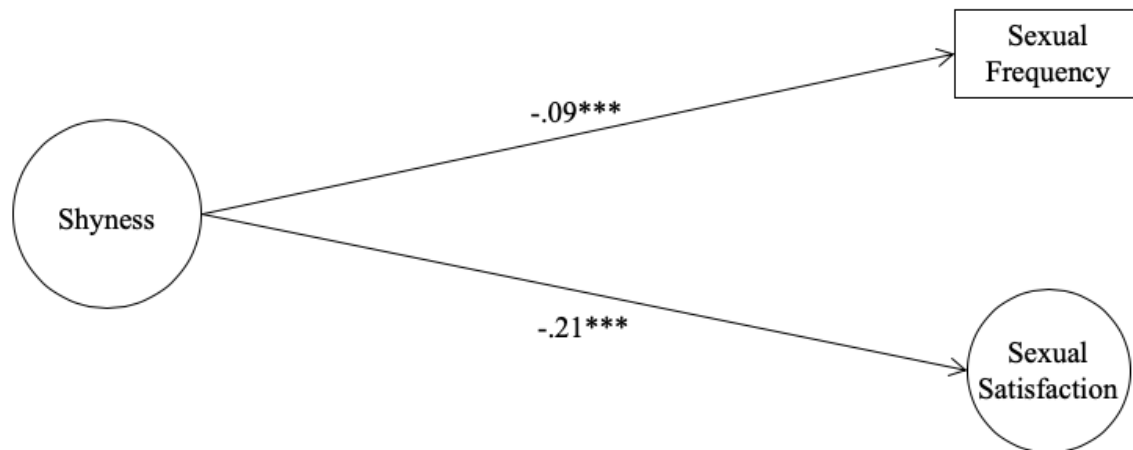
Table 6. Total Indirect Effects via Fear of Negative Evaluation and Body Esteem

	Frequency	Satisfaction
	β	β
Shyness	-.10***(-.11***)	-.07***(-.08***)

Note: Males before parenthesis, females within parenthesis

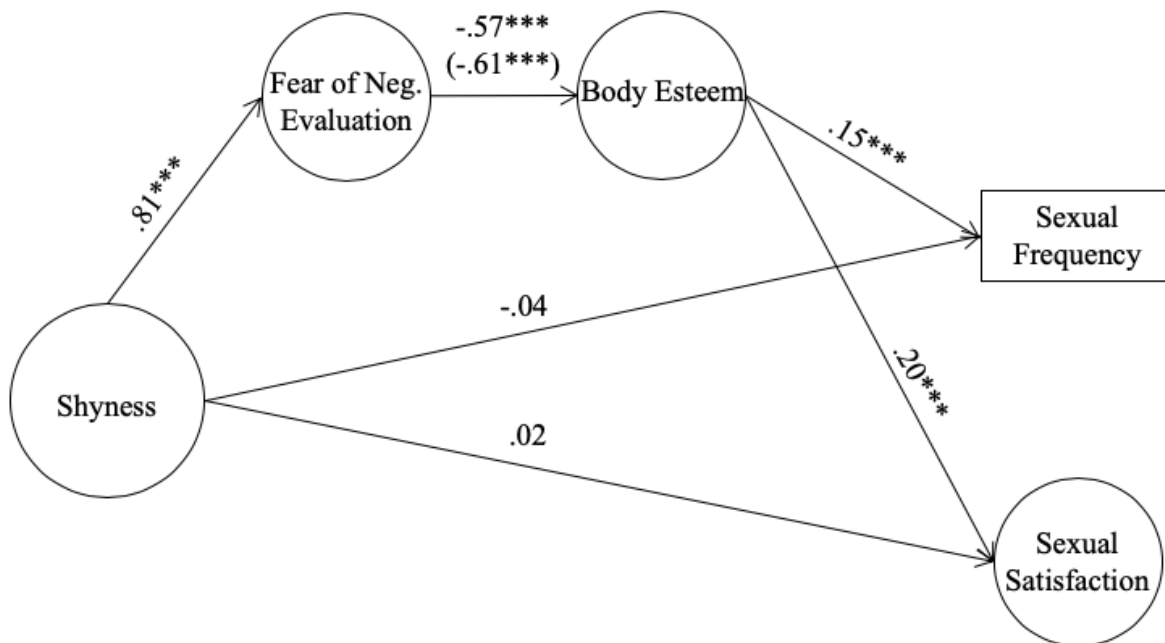
* $p < .05$, ** $p < .01$, *** $p < .001$

Figure 1. Direct Associations between Shyness and Sexual Outcomes



Note: Males before parenthesis, females within parenthesis
 Paths with just one number were constrained to be equal
 *p < .05; **p < .01; ***p < .001

Figure 2. Indirect Associations between Shyness and Sexual Outcomes



Note: Males before parenthesis, females within parenthesis
 Paths with just one number were constrained to be equal
 *p < .05; **p < .01; ***p < .001