
Scripting sexual passivity: A gender role perspective

AMY K. KIEFER^a AND DIANA T. SANCHEZ^b

^a*University of California, San Francisco* and ^b*Rutgers, the State University of New Jersey*

Abstract

In two studies, we demonstrate that attitudes toward traditional sexual roles are linked with increased sexual passivity for women but decreased passivity for men. For both genders, sexual passivity predicts poor sexual functioning and satisfaction. Study 1 showed that endorsement of traditional sexual roles of male dominance and female passivity relates to greater sexual passivity among college-aged heterosexual women but less passivity for college-aged heterosexual men. For both young men and women, greater sexual passivity predicts less overall sexual satisfaction. The findings for Study 2 replicate Study 1 among sexually experienced adults recruited over the Internet. Autonomy mediated these relationships, which persisted when controlling for multiple potential confounds.

Gender roles guide and constrain people's behavior across a wide range of settings, including intimate relationships. Much research has studied the influence of gender roles in professional and academic settings; far less attention has been directed toward gender roles' influence within sexual relationships. Because little research has been conducted on sociocultural factors affecting sexual function (Baumeister, 2001) and because gender-based norms and roles likely exert a prominent influence on intimate relationships, we find this lack of attention unfortunate. Because intimate contexts make gender roles salient, men and women may feel compelled to conform to gender roles during sexual encounters (Coward, 1985; Rohlinger, 2002; Sanchez, Crocker, & Boike, 2005). Given the importance of sexual satisfaction for overall

relationship satisfaction and longevity (see Sprecher & Cate, 2004, for a review), the effects of gender-based sexual roles on sexual enjoyment have potentially broad implications for romantic relationships.

In this paper, we contend that within the United States, gender role conformity indirectly depresses sexual satisfaction for women but not men because traditional gender-based sexual roles dictate sexual passivity for women but sexual agency for men (e.g., Sanchez, Kiefer, & Ybarra, 2006; Tevlin & Leiblum, 1983). We propose that although gender roles should differentially affect men and women, both should experience less sexual satisfaction to the extent that they are sexually passive. Specifically, sexual passivity should increase sexual problems and lower sexual satisfaction by undermining autonomy during sexual activities (Kiefer, Sanchez, Kalinka, & Ybarra, 2006; Sanchez et al., 2006). Past research has provided preliminary support for this contention: College-aged women who reported engaging in passive sexual behavior also reported less sexual arousability, a relationship mediated by reduced autonomy (Sanchez et al., 2006). The present research extends these past studies by addressing two important theoretical concerns. First, theorists have offered numerous explanations for why women would engage in passive

Amy K. Kiefer, Department of Psychology, University of California, San Francisco; Diana T. Sanchez, Department of Psychology, Rutgers, the State University of New Jersey.

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Correspondence should be addressed to Amy K. Kiefer, University of California, Department of Health Psychology, San Francisco, CA 94143-0848, e-mail: amy.kiefer@ucsf.edu.

sexual behavior and for why sexual passivity would be linked to reduced sexual satisfaction. To rule out alternative explanations for these relationships, we examined the extent to which gender-based sexual roles, relative to other potential contributors (e.g., conservatism in relationships, libido, and partners' agency), contribute to women's engagement in passive sexual behavior. We also assess multiple alternative explanations for why sexual passivity might be associated with diminished enjoyment of sexual activities.

Second, past research (e.g., Kiefer et al., 2006; Sanchez et al., 2006) has focused exclusively on how sexual passivity affects sexual arousal and ability to orgasm among women, and hence does not address whether the hypothesized negative relationship between sexual passivity and sexual satisfaction is unique to women. Baumeister (2000, 2004), for example, has argued that women's sexual behavior and experiences are more influenced by social and contextual forces than are men's, implying that sexual passivity should be linked to women's, but not men's, sexual satisfaction. Nonetheless, if both men and women require sexual agency and autonomy for sexual fulfillment, then men's sexual satisfaction should also correlate negatively with sexual passivity. Thus, we examine whether sexual passivity predicts diminished sexual satisfaction among men as well as women.

Gender roles and sexual satisfaction

For decades, researchers have theorized that gender-typed roles and behaviors adversely influence sexual functioning and satisfaction (e.g., MacKinnon, 1982, 1989; Tevlin & Leiblum, 1983). During the late 1970s, researchers became interested in how *psychological androgyny* (Bem, 1974), or the presence of both masculine and feminine gender role personality traits, influences sexual functioning and satisfaction. Studies on psychological androgyny found numerous relationships between androgyny, masculinity, and sexual outcomes. For example, compared to couples that sought treatment for sexual dysfunction, untreated couples had a greater likelihood of having one or more androgynous members

(Safir, Peres, Lichtenstein, Hoch, & Shepher, 1982). Androgynous individuals tended to report higher levels of sexual self-esteem (Kimlicka, Cross, & Tarnai, 1983), more liberal sexual attitudes (Johnson, 1989), and greater overall sexual satisfaction (Kimlicka et al., 1983) than sex-typed or undifferentiated individuals. In some of these studies, masculine gender role self-perceptions seem to be the stronger correlate of sexual self-esteem and sexual satisfaction than androgyny per se (e.g., Kimlicka et al.; Willemsen, 1987).

Although this research provides evidence that stereotypical masculine and feminine personality traits relate to sexual satisfaction, it fails to explain why androgyny positively correlates with sexual satisfaction. Despite androgyny—and gender role self-perceptions more generally—being conceptualized as global personality dimensions, the expression of gender-based traits appears to vary considerably across different social contexts. Women's gender role self-perceptions vary across work, social, and sexual contexts in response to context-specific stereotypic cues and role expectations (Rosenzweig & Dailey, 1991). Men's and women's reports of their global gender-based traits are frequently at odds with those they report exhibiting in heterosexual sexual situations (Lawrance, Taylor, & Byers, 1996). Thus, perceptions of gender role-based expectancies that are specific to sexual contexts may be more important predictors of sexual behavior and satisfaction than global personality traits.

In sum, we found research on androgyny and sexual satisfaction consistent with the contention that gender-based roles proscribing sexual agency might adversely affect women's sexual satisfaction; however, past research has not directly tested this hypothesis. To extend this research, we examine whether gender-typed roles relate to sexual satisfaction because they dictate gender-specific levels of agency in sexual contexts.

Gender roles and sexual agency

Men and women receive different prescriptions regarding agentic behavior, with men's expression of agency favored and women's

expression of agency restricted or met with disapproval in settings ranging from the workplace to the bedroom (Fiske, 1993; Rudman, 1998). Socialization encourages heterosexual men to take on a sexually empowered, directive, dominant, and assertive role, whereas socialization encourages heterosexual women to take on a sexually disempowered, responsive rather than active role (Blumstein & Schwarz, 1983; Schwartz & Rutter, 2000; Sprecher & McKinney, 1993). We expected men to be more sexually experienced than their partners and to initiate and direct sexual activities. In contrast, women learn to avoid the expression of sexual agency and to adopt a submissive, passive sexual role (Gagnon & Smith, 1973; Schwartz & Rutter; Tevlin & Leiblum, 1983).

A number of societal sources, most notably the mass media, inculcate men and women into gender-appropriate sexual roles. Magazines, television shows, and movies frequently depict female sexual submission to male sexual agency and dominance (Baker, 2005; Dworkin, 1987; Jeffreys, 1990; Jhally, 1995, 2000; Kilbourne, 1999; Kitzinger, 1984; Lowry, Love, & Kirby, 1981; MacKinnon, 1989). Magazines targeted to young women promote passivity as a way to satisfy male partners (Kilbourne; Kim & Ward, 2004), and advertisements in men and women's magazines frequently portray women as submissive and dependent (Baker). Female sexual passivity and male sexual agency emerge as prominent themes not only in romance novels (Snitow, 1979) but also in mainstream literature (Millet, 1970; Zilbergeld, 1978).

Inculcation of traditional sexual roles may influence men and women's sexual behavior and enjoyment. Men's and women's reports of their sexual behavior suggest a fair degree of conformity to these culturally prescribed roles. For example, heterosexual men initiate sex more than their partners (see Impett & Peplau, 2003) and more frequently report pressuring their partners to have unwanted sex (i.e., they seek their partners' submission to their personal sexual desires; Miller & Benson, 1999). Correspondingly, many women report willingly submitting to unwanted sexual activities. In one recent survey, half of the

women interviewed reported this form of sexual compliance (O'Sullivan & Allgeier, 1998). At an early age, women's sexual passivity begins: In qualitative studies, adolescent girls frequently describe their initial sexual experiences as "just happening to them" (Martin, 1996; Tolman, 2002).

In addition to the idea that gender-based roles promote sexual passivity among women, researchers have proposed several other explanations for women's lack of sexual agency. Most notably, Baumeister, Catanese, and Vohs (2001) have argued that men's greater tendency to initiate and direct sexual activities stems from men having innately higher levels of sexual desire than women, a difference these authors believe is largely driven by sex differences in testosterone levels. Similarly, Buss (1989) has proposed that within heterosexual couples, there are large discrepancies in sexual desire, with men typically exceeding their female partners. Buss argues that these discrepancies in desire lead women to become upset by their male partners' strategies to have more sex and men to become upset by their female partners' strategies to have less sex. These gender-specific strategies could lead men to assume the role of the sexual initiator, a relatively active role, and women to assume the role of the sexual recipient, a relatively passive role. Regardless of one's gender, having a sexually assertive partner might lead to the adoption of a recipient, passive sexual role. To test these alternative explanations for why women might be more sexually passive than men, we assessed the relationships between men and women's self-reported libido, their perceptions of their discrepancies of desire between themselves and their partners, and their perceptions of their partners' sexual agency.

Sexual conservatism might also account for the hypothesized relationships between endorsement of traditional sexual roles and passive sexual behavior. As noted above, previous studies on androgyny and sexual satisfaction have failed to distinguish between the effects of gender-typed behavior and the effects of conservative sexual values. To determine whether conservative sexual values (as opposed to specific gender-based sexual

roles) predict women's engagement in passive sexual behavior, we assessed participants' beliefs about gender differences in sexual desire and traditional values concerning romantic relationships. Because traditional values and beliefs about gender differences in sexual desire typically imply that men have greater sexual desire than do women, we expected these beliefs would have opposite effects on men and women's sexual agency. We therefore also tested for moderation of these effects by gender.

Sexual passivity and sexual outcomes

Because sexual passivity may undermine autonomy, it has potentially broad implications for intimate sexual relationships (Sanchez et al., 2006). Sexual autonomy refers to feeling that one's actions in sexual contexts are freely chosen, authentic expressions of the self (Deci & Ryan, 1995; Sanchez et al., 2005). Men's and women's sexual pleasure may require sexual autonomy (Weinberg, Swensson, & Hammersmith, 1983), and empirical research supports this assessment (Haavio-Mannila & Kontula, 1997; Sanchez et al., 2005). The ability to communicate one's desires predicts sexual satisfaction for men and women (Haavio-Mannila & Kontula). Thus, we expected sexual passivity to be linked with less sexual satisfaction for both men and women and that this effect would be mediated by reduced sexual autonomy.

As with the hypothesized link between gender-based sexual roles and sexual passivity, numerous alternative explanations exist for why sexual passivity might correlate with reduced sexual satisfaction. For example, individuals who have low levels of sexual desire may be less sexually assertive. In addition, as Buss (1989) suggested, women whose partners exceed them in the desire for sex may frequently submit to undesired sexual activities and therefore experience less enjoyment during those activities. Hence, we controlled for disparities in desire, gender beliefs about desire (i.e., endorsement of the idea that women have less sexual desire than men), traditional values, perceptions of partners' sexual agency, and libido when assessing the relationship between sexual passivity and sexual satisfaction.

In summary, we contend that adherence to gender-based sexual roles within the United States may reduce women's sexual functioning and satisfaction by promoting sexual passivity. Although women might engage in passive sexual behavior for a variety of reasons, such as having a dominant partner or from a lack of sexual desire, we propose that conformity to gender roles is a primary reason for this behavior. Moreover, because research suggests that sexual autonomy promotes both men's and women's sexual function and satisfaction, we expected that passive behavior would predict reduced sexual functioning and satisfaction for both men and women.

Study 1

We hypothesized that the more women endorse attitudes toward traditional sexual roles of male agency and female passivity, the more they would engage in passive sexual behavior. We hypothesized the reverse for men. Furthermore, we expected passive behavior to predict lower sexual satisfaction for men and women.

To rule out alternative explanations for why women adopt a passive sexual role, we controlled for additional variables believed to contribute to sex differences in sexual behavior (Baumeister et al., 2001; Impett & Peplau, 2003), including libido, perceptions of partners' sexual agency, perceived disparities in desire between sexual partners, gender beliefs about desire, and traditional values concerning romantic relationships. Finally, because evidence suggests that socially desirability concerns might influence men and women to respond to certain questions about their sexual behavior (e.g., Alexander & Fisher, 2003), we also controlled for social desirability and for possible gender by social desirability interactions.

Method

Participants

Three hundred ten participants (174 men, 136 women; 170 Whites, 15 Blacks, 19 Latinos, 17 multiracials, 86 Asian Americans, and 2 Native Americans) completed the survey for

course credit in their introductory psychology class at Rutgers University, a large public university in New Brunswick, NJ. This convenience sample provided an affordable preliminary test of these hypotheses. The mean age was 18.79 years ($SD = 1.26$). One hundred thirty-nine participants indicated current involvement in a romantic relationship, 159 indicated single as their relationship status, and 13 declined to answer this question. Two hundred eighty-five heterosexuals, 4 gay males, 2 lesbians, 5 bisexuals, 10 who declined to indicate their sexual orientation, and 5 who were unsure of their orientation completed the survey. Of those, 204 participants had experienced sexual intercourse, 79 had not, and 28 declined to answer. Because gender roles may operate differently among same-gender sexual partners, we only included heterosexual participants in the analyses, resulting in a final sample of 285 (160 men, 124 women).

Measures

To measure *traditional sexual attitudes*, participants rated the following statements on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*): “I believe that men should take on the more agentic or active role during sexual activity,” “I believe that women should take on the more passive role during sexual activity,” “I believe that men should take on the more dominant role during sexual activities,” “I believe that men should prefer to take on the more agentic role during sexual activity,” and “I believe that women should prefer to take on the more passive role during sexual activity.” The Cronbach’s alpha was relatively high, indicating that the measure had internal reliability ($\alpha = .89$). We factor analyzed the items for our measure of attitudes toward traditional sexual roles using principle axis factoring with oblimin (nonorthogonal) rotation ($\delta = 0$) to obtain a simple structure and to allow the items to be intercorrelated (Rennie, 1997). The factor analysis revealed a single factor with eigenvalue greater than 1, which explained 64% of the variance. All items in the scale loaded highly on this factor (factor loadings $> .70$).

To measure *passive sexual behavior*, we assessed passive sexual behavior using the

measure Sanchez et al. (2006) developed. Participants rated the following statements on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*): “I tend to take on a submissive role during sexual activity,” “I prefer to take on the submissive role during sexual activities,” “I tend to take on the passive role during sexual activities,” “I prefer to take on the passive role during sexual activities,” “I tend to take on the more dominant role during sexual activity” (reverse coded), and “I prefer to take on the more agentic or active role during sexual activity” (reverse coded, $\alpha = .89$). To examine the factor structure of our measure of passive sexual behavior, we factor analyzed all items using principle axis factoring with oblimin rotation ($\delta = 0$) to obtain a simple structure and to allow the items to be intercorrelated (Rennie, 1997). The factor analysis revealed a single factor with eigenvalue greater than 1, which explained 64% of the variance. All items in our scale loaded highly on this factor (factor loadings $> .70$).

To measure *libido*, participants rated the following statements on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*): “I have a very strong sex drive,” “I am always in the mood for sex,” “I think about sex almost every day,” “I am not a very sexual person” (reverse coded), and “If it were up to me, I would have sex at least every day” ($\alpha = .86$). To measure *traditional relationship values*, participants indicated their agreement with the following statements on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*) with nine items from Burt’s (1980) sex-role stereotyping subscale that assesses conservative relationship beliefs (e.g., “A girl should be a virgin when she marries,” $\alpha = .65$). To measure *gender beliefs about desire*, participants indicated their agreement on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*) with the following statements: “Men are more sexual than women,” “Men have consistently stronger sexual appetites than women,” “Women want to have sex more often than men” (reverse coded), “Women think about sex more often than men” (reverse coded), and “Men are always in the mood for sex” ($\alpha = .70$). To measure *disparities in desire*, participants indicated their agreement

on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*) with the following statements: "I often feel like I am more sexual than my sexual partners," "I often feel like I am convincing my partners to have sex or engage in sexual activities," "I often feel that my partner(s) does or do not really want to have sex or engage in sexual activities with me," and "I often feel that I need to get my partner(s) in the mood so that we can have sex" ($\alpha = .75$). To measure *partners' sexual agency*, participants answered the following questions on a scale from 1 (*never*) to 7 (*always*): "Does your current or most recent sexual partner indicate their preferences during sexual activities?" "Does your current or most recent sexual partner tell you what she (he) wants during sexual activities?" ($\alpha = .78$). To measure *sexual satisfaction*, participants answered the question, "How satisfied are you with your sex life?" on a scale anchored at 1 (*not at all satisfied*) and 7 (*completely satisfied*). To measure *sexual experience*, we asked participants one question regarding whether or not they had previously engaged in sexual intercourse. To measure *social desirability*, we assessed social desirability responding using the Crowne-Marlowe (1960) social desirability scale.

Results

Passive sexual behavior

See Table 1 for separate zero-order correlations for women and men and Table 2 for sex differences for the measured variables. We analyzed the data using hierarchical linear regressions. At Step 1, we entered all main effects including the control variables: gender, social desirability, partner agency, libido, perceived partner disparities in desire, gender beliefs about desire, traditional relationship values, sexual experience, and attitudes toward traditional sexual roles. At Step 2, we entered the two-way interaction terms of partner agency, libido, perceived partner disparities in desire, traditional relationship values, and traditional sexual scripts with gender. We found several nonsignificant main effects and interactions, which we trimmed from the regression analyses. Table 3 shows all of the

variables retained for the hierarchical regression. We report standardized regression coefficients as beta (β).

These analyses revealed a main effect of social desirability, with greater social desirability predicting less reported passive sexual behavior ($\beta = -.11, p < .03$). Greater libido predicted less passive sexual behavior ($\beta = -.32, p < .001$). As hypothesized, women reported more passive sexual behavior than men ($\beta = .39, p < .001$). We found a nonsignificant main effect for traditional gender roles ($\beta = -.02, p > .7$); however, we found the predicted interaction between gender and attitudes toward traditional sexual roles ($\beta = .23, p < .001$). Neither relationships status nor sexual experience moderated the predicted interaction of Gender Roles \times Gender on Passive Sexual Behavior.

We conducted simple slopes analyses to interpret the interaction, controlling for all significant control variables. The more women endorsed attitudes toward traditional sexual roles, the more likely they were to engage in passive sexual behavior ($\beta = .22, p < .01$), whereas the more men endorsed these roles, the less likely they were to engage in passive sexual behavior ($\beta = -.20, p < .05$). Unexpectedly, we found a significant interaction of gender and perceived partner disparities in desire ($\beta = -.13, p < .05$). Simple slopes testing revealed that the more men felt that they had more sexual desire than their partners, the more they engaged in passive sexual behavior ($\beta = .17, p < .05$), whereas for women, we did not find a relationship between perceived disparities in desire and passive behavior ($\beta = .09, p > .1$).

Sexual satisfaction

At Step 1, we entered all main effects including the control variables: gender, social desirability, partner agency, libido, perceived partner disparities in desire, gender beliefs about desire, traditional relationship values, sexual experience, and passive sexual behavior. At Step 2, we entered the two-way interaction term of gender and passive sexual behavior. As in the previous analysis, we trimmed the nonsignificant effects (see Table 4). Participants who

Table 1. Zero-order correlations by gender of participant in Study 1

Measure	1	2	3	4	5	6	7	8	9	10
1. Traditional sexual roles	—	.365***	-.140	-.452***	.232*	.150	-.007	.103	.127	-.135
2. Passive behavior	-.151†	—	-.357***	.152	.224*	-.079	.081	-.056	.084	-.213***
3. Libido	-.055	-.328***	—	-.125	-.403***	.090	.131	-.190*	-.394***	.113
4. Traditional relationship values	.410***	-.081	-.107	—	.321***	.050	.176†	.189*	.195*	-.026
5. Gender beliefs about desire	-.122	.018	.231**	.030	—	-.205*	.016	.211*	.138	.088
6. Disparities in desire	.092	.178*	.094	.181*	.389***	—	-.198*	-.212*	.144	-.183†
7. Partner's sexual agency	.050	-.018	.117	-.032	-.023	-.125	—	.006	-.324***	.159
8. Social desirability	-.011	-.087	-.156†	-.038	-.081	-.186*	.080	—	.023	.093
9. Sexual experience	-.095	.162†	-.411***	.032	-.097	.057	.007	.196*	—	-.348**
10. Sexual satisfaction	-.031	-.190*	.169*	.005	-.185*	-.246**	.000	.158†	-.289**	—

Note. Men are represented below diagonal and women above diagonal. "Disparities in desire" refers to participants' perceptions that their sexual partners have less sexual desire than they do. "Gender beliefs about desire" refer to the tendency to believe that men have greater sexual desire than women. "Sexual experience" refers to whether or not the participant has engaged in sexual intercourse. Sexual experience was coded as 1 = *experienced sexual intercourse*, while 2 = *not having experienced sexual intercourse*.

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

Table 2. Gender differences in gender roles and sexual attitudes in Study 1

Measure	Men	Women	Difference <i>t</i>	Cohen's <i>d</i>
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)		
Traditional sexual roles	3.96 (0.93)	3.90 (1.12)	0.52, <i>ns</i>	0.09
Passive behavior	3.04 (0.94)	4.20 (0.99)	-9.76***	-1.20
Libido	4.43 (0.77)	3.68 (0.89)	7.46***	0.90
Traditional relationship values	3.53 (0.90)	3.03 (0.96)	4.43***	0.54
Gender beliefs about desire	4.65 (1.07)	4.56 (1.03)	0.75, <i>ns</i>	0.09
Disparities in desire	3.33 (1.08)	2.23 (0.83)	9.33***	1.14
Partner sexual agency	2.92 (0.79)	3.27 (0.86)	-3.49***	-0.44
Social desirability	3.36 (0.19)	3.34 (0.21)	0.74, <i>ns</i>	0.10
Sexual experience	1.21 (0.41)	1.34 (0.48)	-2.43***	-0.29
Sexual satisfaction	4.36 (1.80)	4.71 (1.93)	0.43, <i>ns</i>	-0.19

Note. "Disparities in desire" refers to participants' perceptions that their sexual partners have less sexual desire than they do. "Gender beliefs about desire" refers to the tendency to believe that men have greater sexual desire than women. "Sexual experience" refers to whether or not the participant has engaged in sexual intercourse. Sexual experience was coded as 1 = *experienced sexual intercourse*, 2 = *not having experienced sexual intercourse*.

reported having had sexual intercourse indicated more satisfaction than were those who reported not having had sexual intercourse ($\beta = -.25, p < .001$). Participants who perceived less disparities in desire between themselves and their partners also reported greater sexual satisfaction ($\beta = -.25, p < .001$). As hypothesized, passive sexual behavior predicted less

overall sexual satisfaction ($\beta = -.16, p < .05$). The interaction of gender and passive behavior was not significant ($\beta = -.05, p > .4$), suggesting that passive behavior relates to lower sexual satisfaction for both men and women. Neither relationship status nor sexual experience moderated the predicted relationship between passivity and sexual satisfaction.

Table 3. Statistics from regression analyses predicting passive behavior in Study 1

Measure	Standardized betas	
	Step 1	Step 2
Libido	-.33**	-.32***
Disparities in desire	.09	.04
Gender	.43***	.39***
Social desirability	-.10	.11*
Traditional sexual attitudes	.04	.02
Gender \times Disparities		-.13*
Gender \times Traditional Sexual Attitudes		.23***
Step 1 $R^2 = .36, F(5, 255) = 29.13, p < .001$		
Step 2 $\Delta R^2 = .06, \Delta F(7, 255) = 12.86, p < .001$		

Note. All nonsignificant effects were trimmed from the analyses. The results of the trimmed analyses are depicted here.

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

Table 4. Statistics from regression analyses predicting sexual satisfaction in Study 1

Measure	Standardized betas	
	Step 1	Step 2
Disparities in desire	-.24**	-.25**
Gender	.07	.07
Sexual experience	-.24***	-.25***
Passive behavior	-.16*	-.16*
Gender \times Passive Behavior		-.05
Step 1 $R^2 = .146, F(3, 206) = 8.79, p < .001$		
Step 2 $\Delta R^2 = .003, \Delta F(5, 205) = 0.62, p < .43, ns$		

Note. All nonsignificant effects were trimmed from the initial regression analyses. The results of the final analyses are depicted here. "Sexual experience" refers to whether or not the participant has engaged in sexual intercourse. Sexual experience was coded as 1 = *experienced sexual intercourse*, 2 = *not having experienced sexual intercourse*.

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

Discussion

This study confirmed our hypothesis that endorsement of gender-based sexual roles enhances women's sexual passivity but reduces men's sexual passivity. To our knowledge, this is the first study to demonstrate that endorsement of gender-based sexual roles is linked with men's sexual agency. Contrary to predictions, we did not find a link between traditional sexual attitudes and sexual satisfaction. To determine whether we lacked sufficient statistical power to detect the effects of traditional sexual attitudes on sexual satisfaction, Study 2 employed a larger sample.

This study also tested several competing explanations for why women tend to be more sexually passive than men. As predicted, gender role endorsement correlated with more passive behavior for women, but less passive behavior for men. Providing evidence of the robust nature of the link between gender role endorsement and passive behavior, this relationship persisted when controlling for potential alternative explanations for gender differences in sexual agency.

In addition to the effects of gender role endorsement, libido predicted less sexual passivity for both men and women. People with strong libidos may engage in sexually dominant behavior to satisfy their greater desire for sex. We also found a significant interaction effect of gender and perceptions of disparities in sexual desire on sexual passivity. Men who perceived their partners to be less sexually desirous indicated greater sexual passivity. Men may feel uncomfortable initiating sexual activities with partners they perceive to be unwilling.

This study uniquely shows that passive behavior is linked to diminished sexual satisfaction for men as well as women. These results suggest that both men and women may need to experience sexual agency for sexual fulfillment. This relationship between sexual passivity and sexual satisfaction persisted when controlling for multiple third variables that could explain the relationship between sexual passivity and sexual satisfaction and that were linked to sexual satisfaction. For example, disparities in desire predicted sexual satisfaction; both men and women who felt their partners had less sex-

ual desire than they did reported relatively greater sexual dissatisfaction.

We propose that men and women who are sexually passive may be less sexually satisfied because passivity impairs sexual arousability and the ability to reach orgasm by undermining sexual autonomy. In past research, women's passive sexual behavior correlated with less reported sexual arousability, an effect mediated by reduced sexual autonomy (Sanchez et al., 2006). Because the ability to orgasm relies on sexual arousal (Geer & Janssen, 2000; Masters & Johnson, 1966), a key component of sexual enjoyment (Laumann, Paik, & Rosen, 1999), we hypothesized that passive sexual behavior would predict less sexual arousability, less ability to reach orgasm, and less sexual satisfaction for men and women in a community-based sample. We expected sexual autonomy to mediate these relationships.

Furthermore, because the control variables tested in Study 1 failed to explain the relationships between gender role endorsement and passive sexual behavior and between passive behavior and sexual satisfaction, we examined one additional alternative explanation in Study 2. Men and women who find their partners unattractive may desire sex less and therefore be less sexually assertive. We therefore tested whether perceived attractiveness of sexual partners would explain the hypothesized relationships between sexual passivity and sexual problems. Study 1 employed a college-based convenience sample, which was presumably limited in terms of age, ethnicity, and social class. Study 2 employed a community-based convenience sample, which allowed us to control for age, ethnicity, and income.

Study 2

We performed confirmatory structural equation modeling using EQS software on survey data collected via the Internet. We tested the model described below for heterosexual, sexually experienced men and women and then tested it separately for men and women. The following hypotheses constituted our structural model: (a) Endorsement of traditional roles will predict greater engagement in passive sexual behavior for women but less

engagement for men; (b) passive sexual behavior will predict reduced sexual arousability, ability to achieve orgasm, and sexual satisfaction for men and women; and (c) reduced sexual autonomy will mediate the effects of passive sexual behavior on sexual outcomes.

Method

Participants and procedure

The Internal Review Board at Rutgers University, a large public university in the United States, approved the survey instrument and recruitment procedures. We recruited participants over the Internet via postings on message boards for 150 different Yahoo and MSN groups (see the Appendix for the full text of the recruitment message). Volunteers who were interested in participating accessed the survey through an online survey Web site the university maintains. We kept the survey open to all visitors and used unique computer identifiers, called cookies, to discourage individuals from completing the survey multiple times. The Web program read and set the cookie at the opening page of the survey (i.e., the informed consent page). We used a secure socket layer for data encryption. As in Study 1, this convenience sample provided an affordable, preliminary means to test our hypotheses.

Participants received the questionnaire in two random orders, in which sexual behavior questions either preceded or followed sexual functioning and satisfaction items. Because order did not affect the results, we report results collapsing across order. We presented questions on 11 different pages with the number of questions on each page ranging from 3 to 20 items. We allowed participants to change any responses prior to submitting their surveys. Following survey submission, the program led participants to a debriefing page, which thanked them, briefly described the purpose of the study, and provided contact information.

Five hundred fifty-three participants (189 males, 364 females, and 1 participant who failed to specify his or her gender) completed our survey on the Internet during a 9-month period (December 2004 to August 2005). We excluded 17 participants who terminated the

Internet survey before answering the critical questions from analyses. We conducted analyses on sexually experienced heterosexual participants only. After excluding participants younger than 18 years and those who had not experienced sexual intercourse, indicated a sexual orientation other than heterosexual, or failed to answer these questions, we retained a total of 398 participants for data analyses. Participants (314 Whites, 31 Blacks, 18 multiracials, 17 Latinos, 9 Asian Americans, 6 Native Americans, and 3 missing) ranged in age from 18 to 71 years ($M = 28.97$, $SD = 11.51$). Participants' indicated a mean reported personal income between US\$20,000 and US\$25,000. Participants ranged in marital status with 51% unmarried, 28% married, 11% divorced, 8% engaged, 1% widowed, and 1% failing to provide their marital statuses.

Measures

To measure *traditional sexual attitudes*, we measured attitudes toward traditional sexual roles as we did in Study 1. We found the measure reliable for men ($\alpha = .86$), women ($\alpha = .86$), and the overall sample ($\alpha = .86$). To measure *passive sexual behavior*, we used the same passive sexual behavior measure as Study 1. This measure was reliable for men ($\alpha = .78$), women ($\alpha = .77$), and the overall sample ($\alpha = .81$).

To measure *sexual autonomy*, participants rated two items based on the autonomy scale La Guardia, Ryan, Couchman, and Deci (2000) used and Sanchez and her colleagues (Sanchez et al., 2005; 2006) adapted to the sexual context. They rated the following statements on a scale anchored at 1 (*not at all true*) and 7 (*very true*): "When I am having sex or engaging in sexual activities with someone, I feel free to be who I am" and "When I am having sex or engaging in sexual activities with someone, I have a say in what happens, and I can voice my opinion." We found the scale reliable for men ($\alpha = .73$), women ($\alpha = .71$), and the overall sample ($\alpha = .72$). The two items served as our indicators.

To measure *sexual arousability*, we used 14 items from the sexual arousability index (SAI)

Andersen, Broffitt, Karlsson, and Turnquist (1989) developed. Survey items described specific sexual situations that participants rated on a 7-point scale anchored at 1 (*adverse effect*) and 7 (*always causes sexual arousal*). The measure contains five subscales assessing arousability from seductive activities, body caressing, oral-genital and genital stimulation, intercourse, and erotica or masturbation. To assess overall arousability, we averaged responses on these items without the erotica subscale. We found this measure reliable for men ($\alpha = .89$), women ($\alpha = .88$), and the overall sample ($\alpha = .88$). For the structural equations analysis, we randomly parceled the scale into two indicators. To improve the goodness of fit and reduce bias in estimations of structural parameters relative to estimations using single-item factors, we used the common procedure of parceling (Bandalos, 2002).¹

1. To examine the underlying factor structure of our measures of sexual arousability, ability to reach orgasm, and satisfaction, we conducted a factor analysis with items from all the subscales of the SAI and with the items designed to assess sexual satisfaction and the ability to reach orgasm. We factor analyzed these items using principle axis factoring with oblimin rotation ($\delta = 0$) to obtain a simple structure and to allow the items to be intercorrelated (Rennie, 1997). The factor analysis revealed three factors with eigenvalues greater than 1. All items from the different subscales of the SAI—save the erotica subscale—loaded highly on the first factor (factor loadings $> .50$), which explained 33% of the variance. The erotica subscale, orgasm questions, and sexual satisfaction questions did not load highly on this first factor (all factor loadings $< .20$). Similarly, only the items from the erotica subscale of the SAI loaded highly on the second factor (all factor loadings $> .80$), which explained 13% of the variance. These findings replicate past work (Kiefer et al., 2006; Sanchez et al., 2006), which found that the erotica subscale did not correlate strongly with the other SAI subscales.

In the present study, we found a weak correlation between the erotica subscale and the other subscales for men ($r = .238, p < .001$) but no link for women ($r = .051, p > .4, ns$). Hence, we excluded items from the erotica subscale from subsequent analyses. We parceled items from all the other SAI subscales and entered them as observed variables that reflected one underlying latent variable of sexual arousability in our structural models. Finally, only the orgasm and sexual satisfaction items loaded highly on the third factor (all factor loadings $> .70$), which explained 11% of the variance. Because there are important theoretical distinctions between the ability to reach orgasm and sexual satisfaction, we treated these items as reflecting two separate underlying latent variables (i.e., the ability to reach orgasm and sexual satisfaction) in our structural models.

To measure *ability to reach orgasm*, participants rated the following two statements using a 5-point scale anchored at 1 (*never or almost never*) and 5 (*always or almost always*): “How often do you reach orgasm during sexual activities with your partner(s)” and “How often do you have difficulty reaching orgasm with your partner? (reverse coded).” Reliabilities were low for men ($\alpha = .55$) and satisfactory for women ($\alpha = .75$) and the overall sample ($\alpha = .74$). Although we found the reliability of this scale for men somewhat low, structural equation modeling allows for latent variables with low reliabilities because it corrects for measurement error (Jaccard & Wan, 1996; Osborne, 2003). In addition, we expected low reliabilities with measures utilizing few items, as the number of items influences coefficient alphas (Clark & Watson, 1995; Streiner & Norman, 1995). Higher scores on this measure indicated greater ability to orgasm. These two items served as our indicators.

To measure *sexual satisfaction*, we asked participants two questions comprising the indicators of sexual satisfaction: “How often do you feel satisfied after sex?” and “How often do you find sex pleasurable?”. Participants indicated their responses on a scale from 1 (*never*) to 5 (*always*). We found the measure reliable for men ($\alpha = .74$), women ($\alpha = .82$), and the overall sample ($\alpha = .79$). The two items served as our indicators.

To measure *perceived attractiveness of partner*, we asked participants in three different questions to rate the attractiveness of their partners’ face, body, and overall physical appearance (e.g., “I find my partner’s face, body, or overall physical appearance very attractive”) on a 5-point scale anchored at 1 (*disagree*) and 5 (*agree*). We found the measure reliable for men ($\alpha = .89$), women ($\alpha = .85$), and the overall sample ($\alpha = .86$).

Results

Table 5 presents zero-order correlations among the indicators of each hypothesized underlying factor and the dependent variables by gender, and Table 6 shows the mean gender differences. See Figure 1 for factors loadings for the item parcels. On average, men reported

Table 5. Zero-order correlations for Study 2 by gender of participant

Measure	1	2	3	4	5	6	7	8	9	10	11
1. Traditional sexual roles	1.00	.48***	-.25***	.10	.06	-.15*	-.06	-.04	.04	-.18	-.01
2. Passive behaviors	-.16*	1.00	-.26***	-.18**	.11†	-.14*	-.02	-.12†	.02	-.14*	-.04
3. Sexual autonomy	-.09	-.25**	1.00	.35**	-.27***	.44***	-.06	-.11	-.05	.34***	-.05
4. Arousability	-.00	-.03	.29***	1.00	-.19**	.48***	-.08	-.03	.03	.39***	.17**
5. Orgasm difficulty	-.10	.02	-.24***	-.31**	1.00	-.52***	.01	.00	-.19**	-.26***	.04
6. Sexual satisfaction	-.08	-.15†	.59***	.47***	-.39***	1.00	.02	-.05	.07	.46***	-.02
7. Age	-.16†	-.17*	-.10	-.07*	.17*	-.09	1.00	.56***	.35***	-.17**	-.35***
8. Income	-.04	-.04	.01	.00	-.04	.03	.46***	1.00	.52***	-.10	-.24***
9. Partner's income	-.11	.09	.08	-.07	-.01	.00	.46***	.32***	1.00	-.06	-.26***
10. Partner attraction	-.02	.00	.29**	.55***	-.33***	.50***	-.20*	-.01	-.15	1.00	-.07
11. Married	.27**	.06	.08	.08	.04	-.05	-.45***	-.31***	-.25***	.07	1.00

Note. Correlations for men appear below the diagonal. Marital status was recoded so that 1 = married and 2 = unmarried (single, widowed, divorce).

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

Table 6. Gender differences in all variables in Study 2

Measure	Men <i>M (SD)</i>	Women <i>M (SD)</i>	Difference <i>t</i>	Cohen's <i>d</i>
Traditional sexual roles	3.70 (1.24)	3.73 (1.32)	0.16	0.01
Passive behaviors	3.11 (0.92)	4.06 (0.97)	-9.91***	0.91
Sexual autonomy	5.83 (1.23)	5.82 (1.23)	-0.14	0.01
Arousability	5.93 (0.82)	5.75 (0.86)	2.03*	0.19
Orgasm difficulty	1.75 (0.98)	2.79 (1.17)	-9.39***	0.86
Sexual satisfaction	4.24 (0.94)	4.05 (0.93)	2.04*	0.19
Partner attractiveness	4.35 (0.82)	4.35 (0.79)	0.08	0.01

p* < .05. *p* < .01. ****p* < .001.

greater sexual arousability, ability to orgasm, and sexual satisfaction, and less passive behavior than did women. We tested the hypothesized model with confirmatory latent-variable structural analyses using EQS computer software, which allowed for testing of paths between the predictor variables and multiple dependent variables simultaneously (Klem, 2000).

We tested the structural model on heterosexual, sexually experienced men and women (*N* = 475). We also performed multiple group

comparisons between sexually experienced heterosexual men (*N* = 166) and women (*N* = 308). In accordance with standard structural equation modeling with EQS software (Raykov, Tomer, & Nesselroade, 1991), we report the following goodness-of-fit indices: χ^2 , nonnormed fit and comparative fit (CFI). Acceptable fit indices exceed .90. We also report the root mean square error of approximation (RMSEA) as well as the 90% confidence interval of the RMSEA. RMSEA

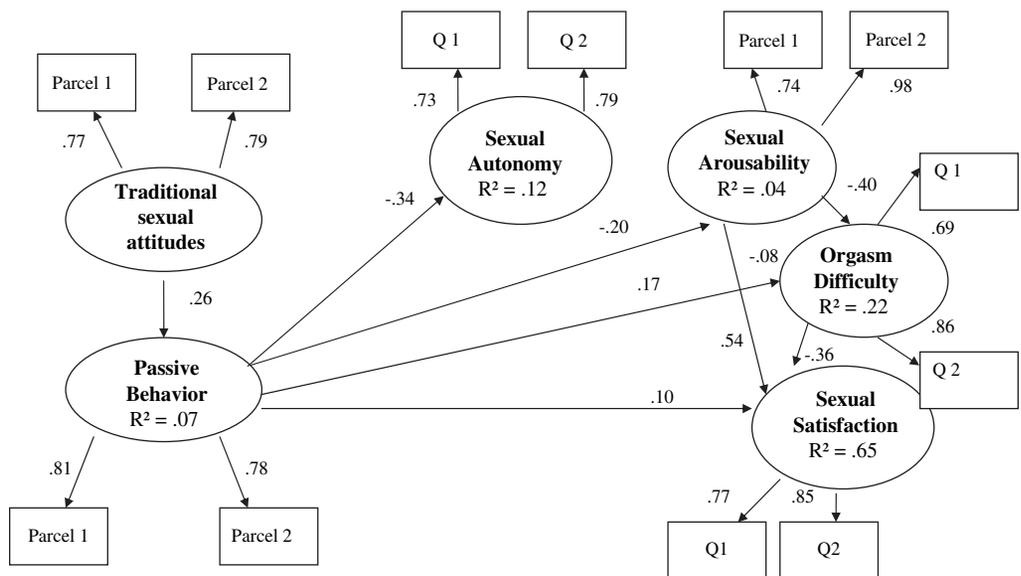


Figure 1. Direct effects of passive behavior on entire sample.

Note. This model excludes the paths between the mediator (sexual autonomy) and the outcomes to test whether passive behavior directly predicts the sexual outcomes. All standardized betas are significant at *p* < .05 unless otherwise indicated.

misfit indices should be at or below .06 (Hu & Bentler, 1999). We report χ^2 to make comparisons between nested models but not as an indicator of the overall fit of the model because sample size influences χ^2 (Klem, 2000).

Preliminary analyses

To assess whether demographic variables or perceived attractiveness of one's sexual partner explained part of the variance in passive behavior beyond the effect of endorsing attitudes toward traditional sexual roles, we regressed passive behavior on income, partner's income, age, ethnicity, marital status, perceived attractiveness of partner, gender, attitudes toward traditional sexual roles, and the two-way interaction of gender and attitudes toward traditional sexual roles. We found no significant effects other than the expected main effect for gender ($\beta = .40, p < .001$), attitudes toward traditional sexual roles ($\beta = .22, p < .001$), and the two-way interaction ($\beta = .21, p < .001$). Separate, trimmed analyses by gender (i.e., analyses that removed nonsignificant effects) revealed that endorsement of traditional sexual roles predicted greater passive behavior for women ($\beta = .40, p < .001$) and less passive behavior for men ($\beta = -.16, p < .05$).

Measurement model

To assess the fit of the observed variables as indicators of the latent variable, we first tested the measurement model. We excluded all paths between latent variables from this assessment. The measurement model fit the data well (see Table 7).

Structural models and mediation by sexual autonomy

We tested the direct effects and full models on the sexually experienced heterosexual sample, collapsing across gender. These models tested for mediation of the hypothesized relationships between sexual passivity and sexual outcomes (sexual arousal, ability to reach orgasm, and sexual satisfaction) by autonomy. Tests of mediation by structural equation modeling

parallel those using multiple linear regressions (Frazier, Tix, & Barron, 2004). According to Baron and Kenny (1986), four steps demonstrate mediation. First, the predictor variable (sexual passivity) must predict the outcome variables of interest (sexual arousal, ability to reach orgasm, and sexual satisfaction). Second, the predictor should correlate with the proposed mediator (sexual autonomy). Third, the mediator should correlate with the outcomes, controlling for the predictor variable. Fourth, the relationship between the predictor variable and the outcomes should no longer be significant when the mediator is included as a predictor. We then determine the significance of the mediation using Sobel's (1982) test.

The direct effects model shown in Figure 1 tests the first two steps. In this model, sexual passivity significantly predicts all three sexual outcome variables. Moreover, sexual passivity correlated significantly with the proposed mediator, sexual autonomy. The indirect effects model shown in Figure 2 tests the third and fourth steps. As illustrated in Figure 2, sexual autonomy predicted sexual arousal and sexual satisfaction, while controlling for sexual passivity. In contrast, sexual autonomy did not significantly predict the ability to reach orgasm. Furthermore, sexual passivity no longer predicted sexual arousal or sexual satisfaction when sexual autonomy was included as a predictor of these outcomes. We used Sobel's (1982) test to test for statistically significant mediation. We report Z scores, that is, standardized scores. According to the significant Sobel's tests, sexual autonomy mediated the path between sexual passivity and sexual arousal, $Z(402) = -3.50$, and sexual passivity and sexual satisfaction, $Z(402) = -3.67$. In contrast, autonomy did not mediate the relationship between sexual passivity and the ability to reach orgasm. Overall, the full model provided a good fit to the data and was largely consistent with our hypothesis (see Figures 1 and 2 and Table 7).

Gender difference model

To test the CFI of the model for both men and women, we tested the fit of the covariance

Table 7. Fit statistics and chi-square comparisons for all models

Model type	Constraints released	χ^2	df	Nonnormed fit	Comparative fit	Root mean square error of approximation	$\Delta\chi^2$
Entire sample: full model		96.02***	43	.96	.97	.055	
Entire sample: direct effects		228.92***	46	.88	.85	.100	-132.90***
Gender comparison: null model		200.01***	103	.93	.95	.048	
Gender comparison: direct effects		278.26***	105	.85	.88	.063	-78.25***
Gender comparison	Traditional sexual roles to passive behavior	160.77***	102	.96	.97	.037	39.24***
Gender comparison	Sexual autonomy to sexual satisfaction	154.57***	101	.96	.97	.036	6.20**
Free comparison model	All	145.51***	92	.96	.97	.038	8.62, ns

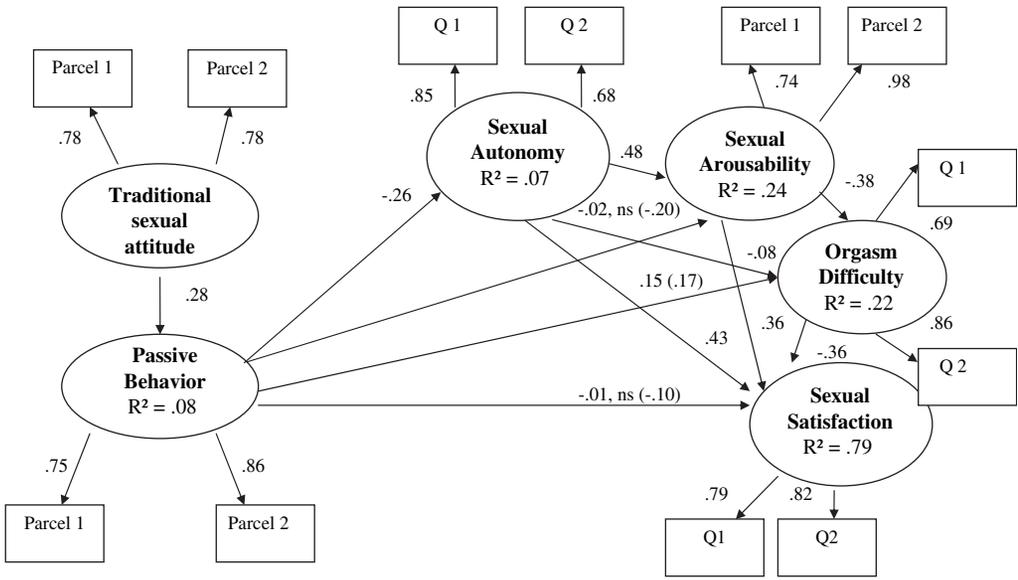


Figure 2. Full model of entire sample.

Note. This model includes the paths between the mediator and the sexual outcomes to test whether sexual autonomy mediates the relationship between passive behavior and the sexual outcomes. All standardized betas are significant at $p < .05$ unless otherwise indicated. Betas from direct effect analyses are included in parentheses.

matrices for both heterosexual, sexually experienced men and women constraining all paths, factor loadings, and covariances to be equal (Bentler, 1989; Byrne, 1994). To examine whether the hypothesized model fit the data well for both men and women, we examined modification indices to determine whether equality constraints should be released to improve the fit of the model.

The full model analysis provided a decent fit to the data (see Table 7). Serial examination of the modification indices suggested that two constraints be released. First, replicating Study 1, women’s attitudes toward traditional sexual roles predicted more passive sexual behavior ($\beta = .69$), whereas men’s attitudes toward traditional sexual roles predicted less passive sexual behavior ($\beta = -.18$). Second, although autonomy predicted women’s sexual satisfaction ($\beta = .30$), the path was significantly stronger for men’s sexual satisfaction ($\beta = .54$). We compared the final model to the unconstrained model; we found no difference between the models, $\chi^2(9) = 8.62$; see Table 7, indicating that no other constraints should be released.

See Figures 3 and 4 for results of the nested gender group comparisons. Relationship status did not moderate any of the observed relationships in the structural equation models.

Discussion

Using an Internet-based sample, Study 2 replicated and extended the results of Study 1. Gender role endorsement again predicted greater sexual agency for men, but less sexual agency for women, even controlling for partners’ attractiveness, participants’ personal income, and age. Thus, replicating Study 1 with a broader sample, gender role conformity was linked to men’s and women’s sexual agency. As in Study 1, sexual passivity, but not endorsement of traditional sexual roles, directly predicted sexual satisfaction and arousal. Thus, the relationship between endorsement of traditional sexual roles and sexual satisfaction seems indirect. Although gender roles appear to script sexual behavior quite differently for men and women, sexual passivity predicts reduced sexual function and

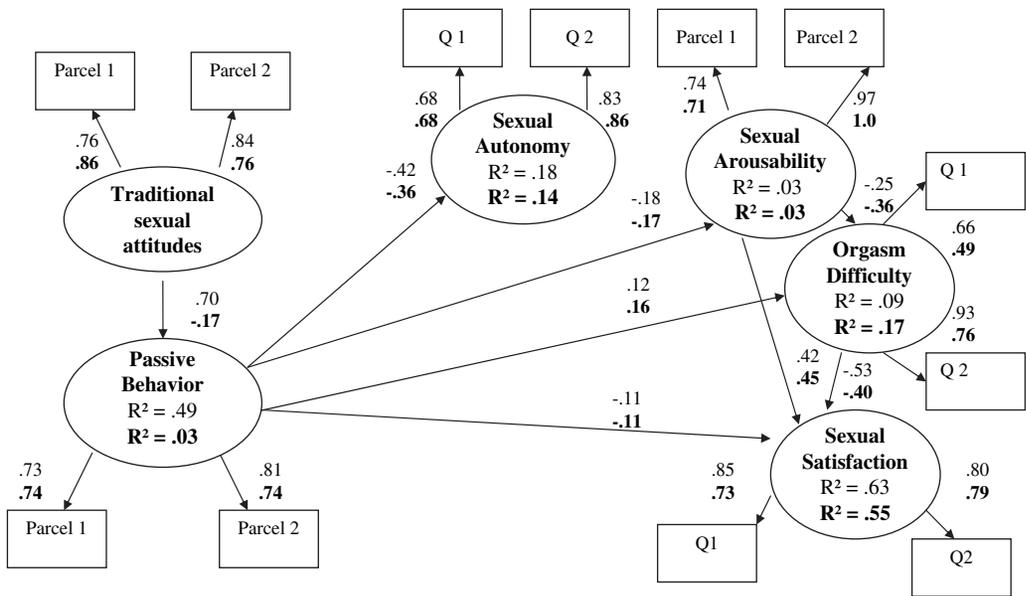


Figure 3. Direct effects of passive behavior by gender.

Note. This model excludes the paths between the mediator (sexual autonomy) and the outcomes to test whether passive behavior directly predicts men and women’s sexual outcomes. All standardized betas are significant at $p < .05$ unless otherwise indicated. The equality constraints from traditional sexual roles and passive behavior was released. Bolded characters refer to men.

satisfaction for both men and women. This finding suggests that men’s and women’s sexual satisfaction largely depends on sexual agency and autonomy.

General Discussion

The results of two studies suggest that adherence to gender roles may promote sexual passivity among women but reduce sexual passivity among men. The more women endorsed attitudes toward traditional sexual roles, the more they engage in passive sexual behavior, whereas the reverse was true for men. For both men and women, passive sexual behavior related to diminished sexual satisfaction in Study 1 and to less sexual arousal, ability to reach orgasm, and satisfaction in Study 2. Taken together, these findings suggest that women engage in sexual passivity largely because sexual scripts dictate such behavior and that sexual passivity adversely affects subjective sexual experiences for both men and women.

Gendered sexual roles

For centuries, gender norms and roles have dictated submission and passivity for women and dominance and agency for men (Beauvoir, 1954; Foucault, 1985; Irigaray, 1996). Social constructions of sexuality persist in the modern era. In movies, magazines, television sitcoms, soap operas, and mainstream literature, we see female passivity and male agency are depicted (Baker, 2005; Kilbourne, 1999; Kim & Ward, 2004; Lowry et al., 1981; Millet, 1970; Snitow, 1979; Tevlin & Leiblum, 1983), and women’s tendency to associate sex nonconsciously with submission reflects these norms (Kiefer et al., 2006; Sanchez et al., 2006). Thus, these beliefs regarding the sexual act and concomitant gendered sexual norms persist at a societal level.

As with all societal phenomena, individuals vary in their exposure to, and in the ways they grapple with, these norms. As shown in Studies 1 and 2, the extent to which men and women endorse attitudes toward traditional sexual roles influences how much their

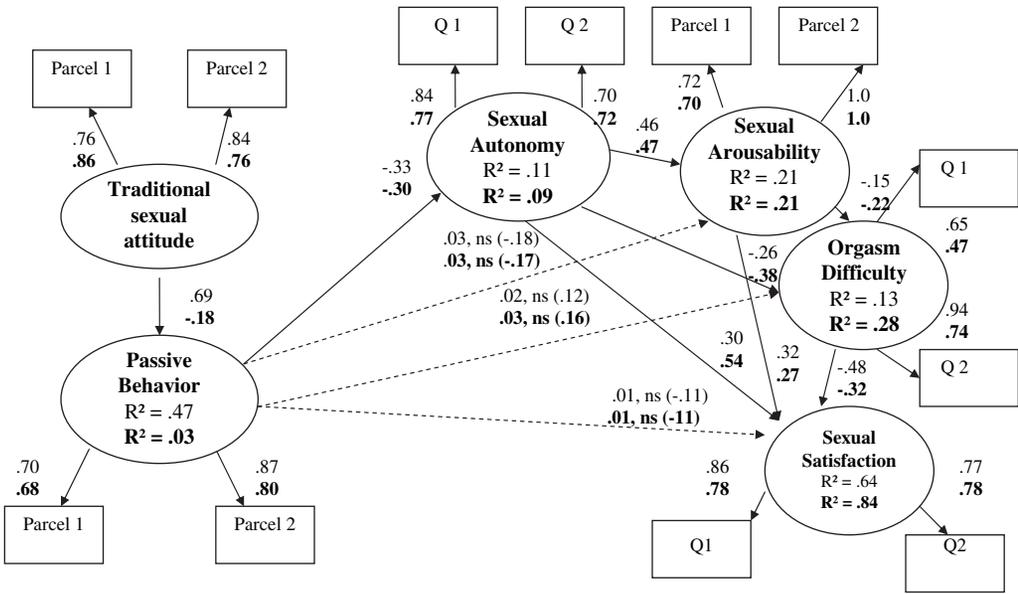


Figure 4. Full model results for men and women separately.

Note. This model includes the paths between sexual autonomy and the sexual outcomes to test whether sexual autonomy mediates the relationship between passive behavior and the sexual outcomes. All standardized betas are significant at $p < .05$ unless otherwise indicated. Standardized betas from direct effect analyses are included in parentheses. Bolded characters refer to men. The equality constraints from autonomy to sexual satisfaction and from traditional gender roles to passive behavior were released.

personal sexual behavior conforms to these roles.

Gender roles and gender differences in sexual problems

Diminished sexual satisfaction is related to engaging in passive behavior for both men and women. These findings imply that both genders may need to engage in active roles during sexual activities to experience sexual autonomy, that is, to feel that they can authentically express their desires. These results are consistent with theories suggesting that perceived control (e.g., Hurlbert, Apt & Rabehl, 1993), sexual self-efficacy (e.g., Zamboni, Crawford, Williams, 2000), and autonomy (e.g., Sanchez et al., 2005) foster satisfying sexual experiences as well as safer sexual practices. These findings also suggest that the personality characteristics of androgyny and masculinity may correlate with greater

sexual satisfaction because these personality traits promoted sexual agency and autonomy.

Despite the similarity in men and women's need for sexual autonomy, these studies imply that traditional sexual roles may indirectly lower women's but not men's sexual satisfaction. In Study 1, traditional sexual attitudes did not directly predict sexual satisfaction. In Study 2, traditional sexual attitudes predicted women's sexual satisfaction but not sexual arousal or the ability to reach orgasm; however, women's gender role adherence predicted sexual passivity, which is linked with greater sexual problems and less satisfaction. In contrast, because gender role adherence promotes sexual agency for men, it may indirectly benefit their sexual satisfaction. This difference might explain why several studies have found that women report lower sexual interest, arousal, and satisfaction than do men (e.g. Baumeister et al., 2001; Laumann et al., 1999; Murnen & Stockton, 1997). On

the other hand, some studies have failed to find gender differences in sexual arousal (e.g., Griffitt, 1987) or sexual satisfaction (e.g., Oliver & Hyde, 1993). The extent to which gender differences exist in measures of sexual arousal may depend heavily on the age of participants, the way in which sexual outcomes are measured, and the experimental setting (Murnen & Stockton). Nevertheless, if by some indicators women are less sexually satisfied than men, engagement in passive behavior may partially account for that difference.

Limitations and future directions

We recognize several limitations in our research that limit our conclusions. The most notable limitation is that we did not test the causal relationships between attitudes toward traditional gender-based sexual roles, passive behavior, and sexual outcomes. Thus, alternative explanations for our findings cannot be ruled out. For example, the present findings could be interpreted as an indication that women and men who lack sexual arousal and satisfaction tend to be sexually passive, for why would individuals actively seek sex that is undesired?

For several reasons, we believe this alternative explanation to be less plausible than the proposal that passive sexual behavior lowers arousal. First, our results strongly suggest that women are motivated to adopt a passive role because they believe that role to be gender appropriate. Second, our studies found that passive behavior predicted reduced sexual satisfaction when controlling for numerous possible confounds, including libido, partner attractiveness, and partner agency. Finally, research on the disconnection between women's physiological and subjective experiences of sexual arousal suggests that sexual agency plays a causal role in women's sexual arousal (Brody, Laan, & van Lunsen, 2003). Women's physiological arousal rarely predicts their subjective experience of sexual arousal (Both, Spiering, Everaerd, & Laan, 2004; Heiman, 1977; Steinman, Wincze, Sakheim, Barlow, & Mavissakalian, 1981). Even chemically induced increases in women's physiological arousability fail to increase their subjective

arousability (Harris, 2004). Moreover, women who are more attuned to their physiological arousal reach orgasm more easily (Brody et al., 2003). Moreover, exposure to images of sexually agentic women reduces the disconnection between women's physiological and subjective sexual arousal (Both et al., 2004). Taken together, these findings suggest beliefs that women should or can be sexually agentic enhance women's sexual arousability and ability to reach orgasm.

In fact, the ability to control and direct sexual interactions may have a direct, biological influence on sexual pleasure. Using a rodent model, Jenkins and Becker (2003) have shown that female rats experience the greatest release of dopamine in reward centers of the brain when they are allowed to dictate the pace of copulation. Although we cannot conduct such research on humans, future studies should explore the effects of sexual autonomy and agency on sex hormones and on the activation of brain centers known to be involved in reward and pleasure.

Because we employed convenience samples, our findings cannot be said to represent the United States population as a whole. Notably, our samples included a wide range of ages and income levels represented across these two studies, and we found consistencies in findings across the college-based and Internet-based samples. Nevertheless, we sampled only heterosexual people. Future research should attempt to replicate these findings among a representative sample of the United States and should assess whether or not these findings generalize to nonheterosexual populations. As gender roles may differ across societies, future research should also examine whether these findings replicate in other cultures.

A remaining question concerns the root cause of gendered sexual roles of male agency and female passivity. These roles obviously have a longstanding history in Western culture (Beauvoir, 1954; Foucault, 1985). Some (e.g., Baumeister et al., 2001) have argued that gender differences in sexual agency stem from sex differences in hormones. Researchers argue that estrogen, for example, promotes passive sexual behavior, whereas testosterone promotes dominant sexual behavior (Baumeister

et al.). We find that gender roles promote female sexual passivity. Our research strongly suggests that gender norms also exert an effect on sexual behavior and, at the very least, exacerbate biologically driven gender differences in sexual agency. Thus, we believe that the study of the relative contributions of hormones and gender norms in determining sexual agency remains an important avenue for future investigation. An examination of how these aspects of sexual behavior vary across different cultures could provide insight into how cultural and biological factors interact to determine sexual behavior.

Conclusions

Women's adherence to traditional gender-based sexual roles relates to diminished sexual function and satisfaction. This impairment may stem from the loss of sexual autonomy, which both sexes require for sexual fulfillment (Sanchez et al., 2005). Adherence to gender roles may therefore have broader implications for heterosexual relationships, as sexual satisfaction is believed to be an important component of satisfying romantic relationships (see Sprecher & Cate, 2004, for a review). For example, sexual satisfaction across time predicts likelihood of divorce (Edwards & Booth, 1994), even when controlling for relationship satisfaction (White & Keith, 1990). Thus, the present findings suggest that women's adherence to traditional gender-based sexual roles may pose a significant barrier to the development and maintenance of satisfying sexual relationships.

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Appendix

At the University of Michigan, we are conducting important research on men and women's behavior in intimate relationships. If you are 18 years of age or older, please take 15–25 min of your time to help us reach better understanding of romantic relationships by filling out a short survey. Men and women of all sexual orientations and ages are encouraged to participate. Please visit our survey at (https://lessons.ummu.umich.edu/2k/utilize/lesson/page/_/Intimacy_Survey/survey_001). This is a secure Web site.

This work has been reviewed and approved by the University of Michigan Review Board. Our success is dependent on your help. We would be honored if you would participate. Sincerely, Amy Kiefer, Researcher, Department of Psychology, University of Michigan.