

Sexual Compulsivity in Heterosexual Married Adults: The Role of Sexual Excitation and Sexual Inhibition in Individuals not Considered “High-Risk”

AMY MUISE

University of Toronto, Mississauga, Ontario

ROBIN R. MILHAUSEN

University of Guelph, Guelph, Ontario

SARA L. COLE

University of Central Oklahoma, Edmond, Oklahoma

CYNTHIA GRAHAM

University of Southampton, United Kingdom

In this study, we explored sexual compulsivity in a non-clinical, non-student, convenience sample of 1,301 heterosexual, married adults (240 women, 1,061 men). To situate our sample within the body of research on sexual compulsivity, we compared current participants’ scores on the Sexual Compulsivity Scale (SCS) with those reported in other studies conducted over the last decade. Scores for the current sample were largely similar to those found in other studies. We also investigated whether sexual excitation and sexual inhibition, constructs in the dual control model of sexual response, would be useful in explaining differences in men’s and women’s sexual compulsivity. Higher Arousability scores (a subscale of sexual excitation) and lower Relationship Importance scores (a subscale of sexual inhibition) were associated with higher levels of sexual compulsivity for both men and women. Gender moderated the association between Inhibitory Cognitions (a subscale of sexual inhibition) and sexual compulsivity; greater inhibition was associated with higher sexual compulsivity for men, but not for

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Address correspondence to Amy Muise, University of Toronto, 3359 Mississauga Road North, Mississauga, Ontario, L5L 1C6. E-mail: amy.muise@utoronto.ca

women. The importance of assessing SCS in samples not considered “high risk” and the utility of applying a sexual inhibition/excitation framework to understanding sexual compulsivity are discussed.

INTRODUCTION

Sexual addiction or “out of control” sexual behavior has received a great deal of attention in the media in recent years. Often this attention is the result of an infidelity scandal, where famous “alpha” males (e.g., Tiger Woods and Jesse James) are identified as “sex addicts.” The media, as well as some clinicians and members of the general public, often use the term “sexual addiction” to describe sexual behaviors that appear to be out of an individual’s control. This is likely because sexual addiction is an easily recognizable term and is equated with other, more familiar addictions, such as alcohol and drugs. Despite the media’s preference for the term sexual addiction, considerable debate persists among researchers regarding the existence and definition of out-of-control sexual behaviors and the mechanisms that underlie these behaviors (Bancroft, 2008; Bancroft & Vukadinovic, 2004; Giugliano, 2004; Kafka, 2010; Levine & Troiden, 1988; Room, 1985). In spite of these differences, there is consensus that individuals who exhibit a higher level of preoccupation with sexual activities may be more inclined toward sexual risk-taking, warranting further investigation in this area (Baldwin & Baldwin, 2000; Benotsch, Kalichman, & Kelly, 1999; Benotsch, Kalichman, & Pinkerton, 2001; Bimbi et al., 2006; Dodge, Reece, Cole, & Sandfort, 2004; Kafka, 2010; Reece, 2003; Reece & Dodge, 2004; Reece, Plate, & Daughtry, 2001).

Sexual Compulsivity

In this article, we use the term *sexual compulsivity* as this term denotes out-of-control sexual behaviors and thoughts on a continuum, as opposed to dichotomous categories (e.g., the presence or absence of a disorder). Kalichman and Cain (2004) defined sexual compulsivity as a psychological construct that can include a preoccupation with sexual desires and behaviors as well as under-controlled sexual impulses and behaviors. Coleman (1992) suggested that the term sexual compulsivity is more appropriate than sexual addiction, a term he argued has been over-popularized in the media. Sexual compulsivity is also the construct that has been the most frequently used in the academic literature.

Developed almost 20 years ago, the Sexual Compulsivity Scale (SCS) was created to measure hypersexuality and sexual preoccupation (Kalichman & Rompa, 1995). The measure incorporates items that reflect distress about sexual thoughts and behaviors, and the degree to which a person feels that

they are able to control their sexual thoughts and behaviors. For example, respondents are asked to indicate the degree to which their sexual desires interfere with their daily lives, relationships, and work responsibilities, as well as the degree to which they feel that their sexual urges are “out of control.”

The SCS has been widely used to investigate high-risk sexual behaviors. Sexual compulsivity research has primarily focused on individuals at high risk of contracting HIV and those who are HIV-positive (Baldwin & Baldwin, 2000; Benotsch et al., 1999; Benotsch et al., 2001; Bimbi et al., 2006; Reece, 2003; Reece & Dodge, 2004; Reece et al., 2001), particularly in relation to their HIV-risk behavior (Kalichman & Rompa, 2005). SCS scores have predicted substance use, a higher number of sexual partners, a greater likelihood of engaging in casual sex, and a greater likelihood of contracting a sexually transmitted infection (STI) (Baldwin & Baldwin, 2000; Bimbi et al., 2006; Benotsch et al., 1999; Benotsch et al., 2001; Dodge et al., 2004; Gulette & Lyons, 2005; Kalichman & Cain, 2004; McBride, Reece, & Sanders, 2008; Reece, 2003; Reece et al., 2001; Reece & Dodge, 2004). Within an HIV-positive sample, compared with individuals scoring lower on sexual compulsivity, participants scoring high on sexual compulsivity reported more unprotected vaginal and anal intercourse and a higher number of sex partners (Benotsch et al., 2001).

Several studies have assessed sexual compulsivity in non-clinical samples, many of these samples of young heterosexual college students (Dodge et al., 2004; Gulette & Lyons, 2005; McBride et al., 2008; Munroe, Kibler, Ma, Dollar, & Coleman, 2010; Perera, Reece, Monahan, Billingham, & Finn, 2009; Stupiansky, Reece, Middlestadt, Finn, & Sherwood-Laughlin, 2009; Wright, Randall, & Hayes., 2012). The SCS demonstrated good reliability and construct validity in a sample of heterosexual college students and was significantly related to high-risk sexual behaviors (Dodge et al., 2004). These findings indicate that SCS is relevant in predicting risky sexual activities in groups that have not traditionally been considered “high-risk.”

However, beyond sexually risky behaviors, limited research has been conducted on correlates of sexual compulsivity. In a sample of U.S. college students, McBride et al. (2008) found that in addition to negative behavioral outcomes, sexual compulsivity may also be associated with negative cognitive states. Specifically, McBride and colleagues (2008) proposed that sexual compulsivity might be associated with concern about negative legal/occupational, psychological/spiritual, social, physical, and financial outcomes. However, these domains were not assessed independently in this study and therefore, it was not possible to assess whether sexual compulsivity was more strongly associated with concern about negative legal/occupational outcomes than social outcomes, for example. McBride et al. (2008) suggested that social and psychological distress about engaging in sexually compulsive behaviors may precede actual negative behavioral consequences, such as

a STI or unintended pregnancy. As such, it may be useful to further consider cognitive and personality-related precursors to sexually compulsive behaviors.

Sexual Excitation and Sexual Inhibition as Possible Predictors of Sexually Compulsive Behaviors

The Dual Control Model of Sexual Response postulates that excitatory and inhibitory systems in the brain determine whether or not sexual arousal will occur within an individual and a specific setting. It is expected that individuals vary in their propensity for sexual excitation and sexual inhibition. Although a certain level of inhibition proneness is adaptive, individuals with higher than average propensity for inhibition are expected to be more vulnerable to experiencing sexual problems, such as erectile difficulties in men and arousal difficulties in women (Bancroft & Janssen, 2000). The Dual Control Model also shows promise in understanding sexual risk-taking. Low inhibition due to fear of performance consequences (e.g., STI infection, unintended pregnancy) is associated with risky sexual behavior such as non-condom use in gay and heterosexual samples (Bancroft et al., 2003; Bancroft et al., 2004).

The Sexual Excitation/Sexual Inhibition Scales (SIS/SES; Janssen, Vorst, Finn, & Bancroft, 2002) were developed to measure individual differences in propensity for sexual excitation and inhibition among men. Subsequently, qualitative data from a focus group study with women (Graham, Sanders, Milhausen, & McBride, 2004) were used to develop the Sexual Excitation/Sexual Inhibition Inventory for Women (SESII-W; Graham, Sanders, & Milhausen, 2006) and this measure was later validated for use with men and women (The Sexual Excitation/Sexual Inhibition Inventory for Women and Men; SESII-W/M; Milhausen, Graham, Sanders, Yarber, & Maitland, 2008). The SESII-W/M scale assesses three inhibitory factors (Inhibitory Cognitions, Relationship Importance, and Dyadic Elements of the Sexual Encounter) and three excitatory factors (Arousability, Partner Characteristics and Behavior, and Setting) that are hypothesized to influence sexual arousal.

It is possible that sexual compulsivity is associated with propensity for sexual inhibition and sexual excitation. Research on sexual excitation, sexual inhibition, and sexual compulsivity, however, has been limited. In one study involving a small group ($N = 31$) of self-identified male “sex addicts,” scores on sexual excitation were higher in the “sex addicts” group than an age-matched control group, but the two groups did not differ in sexual inhibition scores (Bancroft & Vukadinovic, 2004). However, when divided into “compulsive masturbators” and those whose sexually compulsive behavior involved other people, the latter group scored significantly lower on sexual inhibition than both the “compulsive masturbator” and the control groups. To date, this is the only study that has explored the relationship between

sexual excitation and inhibition, and sexual compulsivity, and there has been no investigation of this relationship in women.

Aims of the Current Study

The overall aim of the current study was to explore the association between sexual compulsivity and sexual inhibition/excitation in a non-clinical, non-student sample of married men and women. The specific objectives were threefold. First, in order to situate the current study in context with previous research on sexual compulsivity, we compared levels of sexual compulsivity in the current sample (not typically considered high-risk) to those reported in previous research. Second, we sought to determine if sexual excitation and sexual inhibition predicted sexual compulsivity. Third, we assessed whether the relationship between sexual excitation and sexual inhibition and sexual compulsivity was different for men and women. Past research, albeit limited, and predictions based on the dual control model (Bancroft, Graham, Janssen, & Sanders, 2009) suggest that high sexual excitation and low sexual inhibition will be associated with higher sexual compulsivity (Bancroft & Vukadinovic, 2004); however, it is not known whether this relationship will hold true for both men and women.

METHOD

Recruitment

Participants were recruited from an electronic mailing list for a large, internet-based sexual enhancement product company which sells products such as sexual furniture (e.g., benches and foam beds), sex toys (e.g., vibrators), books, lingerie, lubricants, and DVDs. Individuals were included on the mailing list if they had made previous online purchases or if they had emailed the company with a question about one of their products. The mailing list was comprised of 65,859 email addresses. The company indicated that their customers were predominantly married men with an annual income of over \$45,000 per year who resided on the West Coast or in the Southeastern United States. Only individuals over the age of 18 years and English literate were eligible to participate.

Procedure

The owner of the sexual enhancement product company was approached in November, 2005 to request help with recruitment for an online study on sexual arousal, sexual health, and condom use behaviors. The owner agreed

to send an email invitation to participate to all individuals on the company's electronic mailing list. The initial email was sent in January of 2006, with a reminder email sent in February. The email invitation included an embedded link to the study Web site. In order to prevent individuals from participating in the study multiple times or forwarding the email invitation to allow others to participate, each link included a random number code that would only be active one time. The email invitation informed recipients that the study was on sexual arousal and sexual health and that after participating they would be eligible to enter into a lottery draw for one of ten American Express Gift Cards valued at \$100 each.

Clicking the study link led individuals to the study information page. This page summarized the study focus and provided information about participants' rights; specifically, that participation in the study was voluntary, that participants were able to withdraw at any time, that the survey was anonymous, and that no identifying information or internet protocol addresses would be collected.

Participants gave consent to participate by clicking a link at the bottom of the study information page, which took them to the questionnaire Web site. Upon completion of all study questions, participants were forwarded to an additional site where they could enter their email address into the lottery draw; it was made clear to participants that entry into the draw was optional. Winners were notified by email and then provided a mailing address so that the gift card could be sent. Names and addresses were not linked to study data. Gift cards were sent in plain envelopes with no mention of study participation. The study Web site was active until mid-March, 2006. The Research Ethics Board at the University of Windsor approved this research.

Measures

DEMOGRAPHICS

Participants provided demographic information including their age, gender, sexual orientation, relationship status and number of children. They also responded to questions about their country of residence, level of education, and annual income.

SEXUAL COMPULSIVITY

Participants' levels of sexual compulsivity were measured using the Sexual Compulsivity Scale (Kalichman & Rompa, 1995). Each participant's mean score was calculated based on his or her responses to 10 items rated on a 4-point Likert-type scale from "*not at all like me*" to "*very much like me*." Sample items are: "My sexual thoughts and behaviors are causing problems in my

life” and “I have to struggle to control my sexual thoughts and behavior.” The reliability of the SCS was high in the total sample ($\alpha = .88$) and for the sub-groups of male ($\alpha = .87$) and female participants ($\alpha = .85$).

SEXUAL EXCITATION/SEXUAL INHIBITION

Three subscales from the Sexual Excitation/Sexual Inhibition Inventory for Women and Men (SESII-W/M; Milhausen et al., 2008) were used as personality-related predictors of sexual compulsivity. In the current study, the subscales measuring Inhibitory Cognitions (a subscale of Sexual Inhibition) and Arousability (a subscale of Sexual Excitation) were most relevant as these assess individual and cognitive influences on sexual arousal as opposed to partner or situational characteristics. Additionally, the subscale Relationship Importance (a subscale of Sexual Inhibition) was included, as links between sexual compulsivity and casual sex have been demonstrated in past research (e.g., Kalichman & Cain, 2004).

The Arousability subscale consists of five items. Items generally assess an individual's propensity to become aroused to visual stimuli or a sexually attractive person or partner. A sample item is: “When I think about someone I find sexually attractive, I easily become sexually aroused.” Higher scores indicate a tendency to easily become sexually aroused.

The Relationship Importance subscale consists of five items which suggest sexual arousal depends upon sex occurring within a specific relationship context (i.e., a relationship characterized by trust and emotional security). A sample item is: “If I think that a partner might hurt me emotionally, I put the brakes on sexually.” Higher scores indicate that sexual arousal is inhibited when these relationship conditions are not met.

The Inhibitory Cognitions subscale consists of eight items which refer to cognitions or emotions which inhibit sexual arousal or to overall difficulty in becoming or staying aroused. A sample item is: “Sometimes I feel so ‘shy’ or self-conscious during sex that I cannot become fully aroused.” High scores on this subscale indicate sexual arousal is negatively influenced by thoughts or worries.

Participants were asked to respond to items indicating how they would respond in each specific sexual situation. Each item was rated on a 4-point Likert-type scale, from “*strongly disagree*” to “*strongly agree*.” The reliability of the SESII-M/W was acceptable across the three subscales: Inhibitory Cognitions $\alpha = .83$, Relationship Importance $\alpha = .77$, Arousability $\alpha = .69$.

Data Analyses

Mean scores on the SCS were calculated in order to contrast these with scores on the SCS from other samples, using independent samples *t*-tests.

Comparison studies were found via Scholarsportal journal database search with the search term “sexual compulsivity.” Cohen’s d was used to determine the effect sizes for significant comparisons. Effect sizes of .2 to .49 were considered small, those between .5 and .79 were considered medium, and those greater than .8 were considered large (Cohen, 1988). Pearson correlation coefficients were calculated to ascertain linear relationships existed between the SESII-W/M subscales and the SCS. Hierarchical linear regression was used to predict scores on the SCS. Given the range of ages in the current sample (age 18 to 67), age was entered into the first block in order to control for this variable. In order to address the research objectives, gender, the SESII-W/M subscales were entered into the second block, and the gender by SESII-W/M interaction terms were entered into the third block.

RESULTS

Participants

Almost 2,000 participants ($N = 1,987$) took part in the study (response rate of 3%). Four hundred twenty-six women and 1,561 men completed the survey online between January and March of 2006. Current analyses focused on those who self-identified as heterosexual and indicated that they were married at the time of the survey ($N = 1,316$). Five men and one woman were excluded from analyses for not specifying their age, and nine additional men were removed because they reported their age as being older than three standard deviations above the mean age.

The final analytic sample consisted of 240 women (M age = 32.77 years, $SD = 8.15$) and 1,061 men (M age = 38.76 years, $SD = 9.17$). Eighty-four percent of both the men and women self-identified as White, 5% identified as Hispanic or Latino/Latina, and 4% identified as Black or African. Over 90% were currently living in the United States. The majority (63%) lived in a large or medium city or the surrounding area. Almost three-quarters (71%) identified as Protestant, Catholic, or other Christian, and about one-half (57%) indicated religion was “important” or “very important” to them. The majority of both the men and the women had children at the time of the survey (76% and 68%, respectively). About three-quarters of the men (73%) and almost two-thirds of the women (60%) had at least some college experience. Almost two-thirds of the women (63%) and the majority of the men (85%) reported incomes of over \$50,000 per year.

In the current sample, men ($M = 1.87$, $SD = .60$) scored higher on the SCS than women ($M = 1.40$, $SD = .48$; $t[430.53] = -13.01$, $p < .001$) and Cohen’s d (Cohen, 1988) indicates that this difference is large ($d = .74$). Table 1 reports the means and standard deviations for the SESII-MW subscales. Men scored higher than women on the SESII-W/M subscale Arousalability, whereas

TABLE 1 Mean Scores on Arousability, Inhibitory Cognitions and Relationship Importance for Men and Women

Scale	Men Mean (SD)	Women Mean (SD)
Arousability	3.17 (.44)	2.78 (.48)
Inhibitory Cognitions	1.91 (.46)	2.41 (.52)
Relationship Importance	2.25 (.57)	3.04 (.56)

Note. All gender differences significant at the $p < .001$ level.

women scored higher than men on the Inhibitory Cognitions and Relationship Importance subscales.

Sexual Compulsivity Comparisons Between the Current and Past Samples

In general, scores on the SCS in the current study were similar to scores generated by other samples. Means for participants in the current sample were compared to those reported in samples of men and women (Winters, Christoff, & Gorzalka, 2010), university students (Dodge et al., 2004; Gullette & Lyons, 2005; Munroe et al., 2010; Perera et al., 2009; Stupiansky et al., 2009; Wright et al., 2012), gay and bisexual men and women (Kelly, Bimbi, Nanin, Izienicki, & Parsons, 2009; Schnarrs et al., 2010), HIV positive men and women (Benotsch et al., 2001; Reece et al., 2001; Rendina, Golub, Grov, & Parsons, 2012), gay and bisexual sex workers (Parsons, Bimbi, & Halkitis, 2001), men who reported cruising for sex on campus (Reece & Dodge, 2004), internet child pornography offenders (Niveau, 2010), and clients seeking help for hypersexual behavior (Reid, 2007; 16 studies altogether, with 23 total comparisons between participants in the current study and men and/or women from other studies). Sixteen of the comparisons did not result in significant differences or elicited small effect sizes (see Table 2 for the means and standard deviations for the current and comparison samples and the effect sizes for each contrast). In two studies, large differences in SCS scores were seen between previous samples and participants in the current study. Specifically, participants in the current study scored lower on the SCS than a sample of men seeking help for hypersexual behavior (Reid, 2007) and higher than a sample of male and female students recruited from a Southern U.S. university (Gullette & Lyons, 2005). Four of the 23 effect sizes would be considered medium-sized; three of these involved comparisons between female participants in the current study and samples of female college students (Munroe et al., 2010; Perera et al., 2009; Wright et al., 2012). However, no clear pattern existed; in two of these cases the current sample scored higher on the SCS than the college samples, in the other, the reverse was true.

TABLE 2 Sexual Compulsivity Scale Score Comparisons Between the Current and Past Samples, with Effect Sizes

Study	Sample	Men					Women				
		<i>M</i>	<i>SD</i>	<i>N</i>	<i>p</i>	<i>d</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>p</i>	<i>d</i>
Current sample		1.87	0.60	1061			1.46	0.51	240		
Rendina et al., 2012	HIV+ gay and bisexual men	1.73	0.77	127	<.05	0.20					
Wright et al., 2012	University women						1.94	1.02	251	<.0001	-0.63
Munroe et al., 2010	African American undergraduate women						1.2	0.33	30	<.01	0.62
Niveau, 2010	Internet child pornography offenders	2.21	0.63	36	<.001	-0.55					
Schnarrs et al., 2010	Gay men	1.65	0.66	270	<.0001	0.35					
Winters et al., 2010	Men and women	1.66	0.51	5834	<.0001	0.38	1.43	0.42	7251	NS	
Perera et al., 2009	University students	1.64	0.56	166	<.0001	0.40	1.24	0.28	373	<.0001	0.56
Kelly et al., 2009	Gay and bisexual men and women	1.99	0.69	1214	<.0001	-0.19	1.71	0.65	329	<.0001	-0.43
Stupiansky et al., 2009	College women						1.32	0.42	170	<.01	0.30
Reid, 2007	Men seeking help for hypersexual behavior	2.66	0.36	67	<.0001	-1.65					
Gullette & Lyons, 2005	University students	1.40	0.50	99	<.0001	0.86	1.10	0.39	154	<.0001	0.80
Dodge et al., 2004	University students	1.64	0.40	325	<.0001	0.46	1.33	0.32	551	<.0001	0.31
Reece & Dodge, 2004	MSM/MSW campus cruisers	1.8	0.43	30	NS						
Benotsch et al., 2001	HIV+ men and women	1.64	0.63	203	<.0001	0.37	1.42	0.64	91	NS	
Reece et al., 2001	HIV+ men and women	2.05	0.64	166	<.001	-0.29	1.61	0.39	96	<.01	-0.33
Parsons et al., 2001	Gay/bisexual male sex workers	1.92	0.69	50	NS						

Notes: If a summed score was presented, it was divided by 10 for consistency. MSM = men who have sex with men. MSMW = men who have sex with both men and women.

The Relationship between Sexual Inhibition/Sexual Excitation and Sexual Compulsivity

Overall, significant positive correlations existed between SCS scores and the three subscales from the SESII-M/W (Table 3). For women, SCS scores were negatively correlated with scores on Relationship Importance and positively correlated with Arousability. For men, significant negative correlations

TABLE 3 Correlations between Scores on the Sexual Compulsivity Scale and Arousability, Inhibitory Cognitions and Relationship Importance

Gender	Scale	Arousability	Inhibitory Cognitions	Relationship Importance
Men	SCS	.36***	.13***	-.17***
	Arousability		-.20***	-.26***
	Inhibitory Cognitions			.26***
	Relationship Importance			
Women	SCS	.51***	-.10	-.23***
	Arousability		-.42***	-.31***
	Inhibitory Cognitions			.20**
	Relationship Importance			

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

between SCS scores and Relationship Importance, and significant positive correlations with Arousability and Inhibitory Cognitions, were found.

The results of the hierarchical multiple regression analysis revealed that, after controlling for age, higher Arousability, higher Inhibitory Cognitions, and lower Relationship Importance scores predicted higher levels of sexual compulsivity (see Table 4). Once the gender moderations were added in Block 3, Arousability remained a significant predictor of sexual compulsivity, and there was a significant interaction between gender and Inhibitory Cognitions predicting sexual compulsivity. That is, gender moderated the association between Inhibitory Cognitions and sexual compulsivity. For men, higher scores on Inhibitory Cognitions (indicating greater worries and concerns during sex) were associated with higher levels of sexual compulsivity,

TABLE 4 Regression Model Predicting Sexual Compulsivity Scale Scores with Arousability, Inhibitory Cognitions and Relationship Importance, Controlling for Age

	Variable	<i>b</i>	SE <i>b</i>	β
Block 1	Age	.003	.002	.051
Block 2	Age	.000	.002	-.001
	Gender	.298	.046	.191***
	Arousability	.521	.035	.405***
	Inhibitory Cognitions	.267	.032	.226***
	Relationship Importance	-.125	.027	-.134***
Block 3	Age	.000	.002	-.008
	Gender	.273	.058	.175***
	Arousability	.566	.165	.440**
	Inhibitory Cognitions	-.052	.147	-.044
	Relationship Importance	-.014	.131	-.015
	Gender x Arousability	-.014	.042	-.041
	Gender x Inhibitory Cognitions	.093	.041	.267*
	Gender x Relationship Importance	-.040	.045	-.116

Note. Block 1 $R^2 = .002$; Block 2 $R^2 = .27$; Block 3 $R^2 = .27$

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

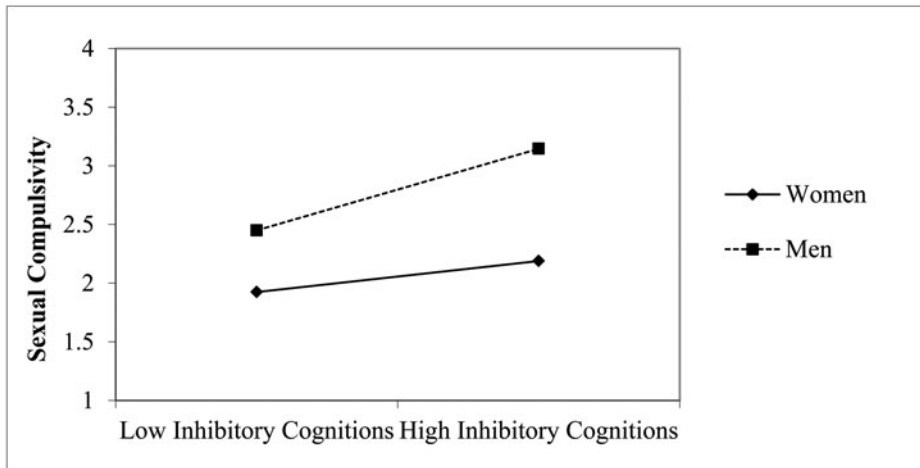


FIGURE 1 Gender moderating the association between inhibitory cognitions and sexual compulsivity. Main effects were controlled.

but this was not the case for women (see Figure 1). Twenty-seven percent of the variance in sexual compulsivity scores was accounted for by the predictor and control variables.

DISCUSSION

The objectives of the current study were threefold. First, we compared SCS scores in the current sample to those reported for previous samples. Interestingly, the SCS scores in the current sample were not substantially different than those in previous samples. For both men and women, differences were largely either non-significant or small, as determined by Cohen's *d*. Thus, it would seem married adults seeking information or purchasing products from a sexual enhancement product company do not differ greatly in sexual compulsivity scores from a diversity of previous samples including university students, men who cruise for sex on college campuses, and gay and bisexual sex workers. Furthermore, it is important to note that in all previous studies with the exception of one (men seeking help for hypersexual behavior; Reid, 2007), the sample means were around or below two, which does not represent a general endorsement of the compulsivity items (rated on a 4-point scale). SCS scores are generally low, even among samples which are typically considered to be "at-risk." Nonetheless, scores on the SCS have been shown to correlate with risk-taking behavior, warranting its continued use in intervention research.

Our second objective was to explore the relationship between Sexual Excitation/Inhibition and sexual compulsivity in a non-clinical sample of

married men and women. Sexual Inhibition and Sexual Excitation subscales significantly predicted sexual compulsivity in both genders. Among men and women, higher levels of Arousability (ease of becoming aroused to a variety of sexual stimuli) and lower levels of Relationship Importance (the degree to which sexual arousal depends upon sex occurring within a specific relationship context) predicted higher levels of sexual compulsivity. Finally, we wanted to determine whether gender moderated the associations between the scores on the SESII-M/W subscales and on the SCS. The results indicated a significant interaction between gender and Inhibitory Cognitions, suggesting that the relationship between the Inhibitory Cognitions subscale (reflecting sexual concerns) and sexual compulsivity was different for men and women. Women's levels of sexual compulsivity did not significantly differ whether they scored high vs. low on the Inhibitory Cognitions subscale. Conversely, men who were high vs. low in Inhibitory Cognitions reported higher levels of sexual compulsivity. As such, sexual inhibition seems to be more relevant to men's experience of sexual compulsivity than women's.

Though seemingly counterintuitive (the notion that high sexual inhibition would be associated with more "out of control" sexual thoughts and behaviors), research based on the Dual Control model with a sample of gay men indicated that inhibition associated with fear of performance failure was associated with increased sexual risk-taking (Bancroft et al., 2003). Perhaps men who have more sexual concerns may seek out more intense sexual experiences (e.g., new sexual partners, unprotected intercourse) to try to compensate for sexual difficulties, resulting in higher levels of sexual compulsivity. Alternatively, it may be that an inhibitory response is adaptive for married men who are high in sexual compulsivity. One of the five adaptive functions of sexual inhibition for men is "when excessive involvement in the pursuit of sexual pleasure distracts from other important adaptive functions" (Bancroft et al., p. 122). It is possible that in a sample of married men, many of whom had children, sexually compulsive tendencies may have distracted them from their familial and relational responsibilities, and, as such, sexual inhibition would increase to redirect their attention to these important responsibilities.

Although sexual compulsivity has gained substantial support in the empirical literature, particularly as a predictor of sexual risk-taking (e.g., Dodge et al., 2004), there is still disagreement among researchers and clinicians about the underlying mechanisms of out-of control sexual behaviors (Bancroft & Vukadinovic, 2004; Giugliano, 2004; Levine & Troiden, 1988; Room, 1985). The findings of the current study, as well as others (e.g., Bancroft & Vukadinovic, 2004), suggest a possible link between sexual compulsivity and sexual arousal. Other researchers have postulated that sexual compulsivity may represent the extreme end of the sexual desire continuum (Dodge et al., 2004). Winters and colleagues (2010) found that sexual compulsivity (as measured by the SCS), sexual excitation, and sexual desire (as measured

by the Sexual Desire Inventory-2, SDI-2) were all significantly and positively correlated, and the pattern of correlations was similar among men and women who had sought treatment for sexually compulsive behavior compared with a non-treatment group. A confirmatory factor analysis of the items from the SCS and the SDI-2 provided support for Winters and colleagues' (2010) hypothesis that a single underlying factor best accounted for scores of sexual compulsivity and sexual desire. According to this hypothesis, compulsive sexual behaviors may merely be a means of satisfying a strong sexual appetite. The current study, in which Arousability and the SCS share a small but significant amount of variance, supports Winters and colleagues' assertion that more research addressing the relationship between sexual desire and problematic sexual behaviors is warranted and, further, suggests that extending this line of research to include sexual arousal would be worthwhile.

Limitations

The findings of this study are limited by the self-report nature of the study and the low response rate, although Witmer, Colman, and Katzman (1999) suggested that a response rate below 20% is not uncommon for unsolicited email surveys. One strength of a Web-based format is that it saves money and time, and minimizes data entry errors. Furthermore, Web surveys may be more appropriate for collecting sensitive data, such as sexuality information (Kittleson, 2003; Mustanski, 2001; Pealer, Weiler, Pigg, Miller, & Dorman, 2001; Rhodes, DiClemente, Cecil, Hergenrather, & Yee, 2002; Supovitz, 1999; Swartz & Hancock, 2002). Due to the convenience sampling method and the nature of the Web site from which participants were recruited, there are also issues of representativeness and generalizability. Individuals who purchase sexual enhancement products or ask questions on sexual enhancement Web sites may have different sexual norms and behaviors than the general population. In addition, we had many more men in the sample than women, and the men were, on average, slightly older than the women. In general, women have not been represented as much as men in the sexual compulsivity literature, and future research may want to consider whether sexual compulsivity is experienced similarly for men versus women. The findings of the current study suggest gender differences in the association between sexual inhibition and sexual compulsivity.

The current study is, however, the first to provide evidence of a relationship between Sexual Inhibition/Excitation and sexual compulsivity in men and women. The findings indicate that while Arousability is related to sexual compulsivity in both men and women, there is a differential relationship between Inhibitory Cognitions, one aspect of sexual inhibition, and sexual compulsivity, in men and women. In this sample of heterosexual married adults, higher scores on one inhibition subscale, Inhibitory Cognitions, were

associated with higher scores on sexual compulsivity in men. Further research is needed to understand the nature of this construct and its relationship to Sexual Excitation/Inhibition in diverse samples.

Conclusions

The current findings suggest that sexual compulsivity is present among a sample of heterosexual married adults, and at levels similar to those found in other studies conducted with a diversity of participants. Further, our results demonstrate the utility of applying the dual control model of sexual response to the study of sexual compulsivity. Both men and women who were higher in sexual excitation (i.e., Arousability) reported higher levels of sexual compulsivity. For men, but not women, sexual inhibition (i.e., Sexual Concerns) was also associated with higher sexual compulsivity. One clinical implication of this finding is that men who report more sexual concerns or performance anxiety may cope with this by seeking more intense sexual experiences. In contrast, when arousal is dependent on a relationship context characterized by trust and intimacy, this has a small but significant protective effect against engaging in sexually-compulsive behaviors for both genders. The strength and direction of the relationships found support the proposition that sexual arousal (specifically, propensity for sexual inhibition and excitation) is a separate, yet relevant construct to sexual compulsivity, and that these relationships warrant further exploration in other samples.

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