Published in final edited form as:

J Sex Res. 2004 November ; 41(4): 343–350. doi:10.1080/00224490409552241.

Sexual Compulsivity Among Heterosexual College Students

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Abstract

A growing body of literature suggests that an association exists between sexual compulsivity and participation in sexual behaviors that are high risk in terms of HIV/STD infection. In most of these studies, sexual compulsivity has been measured using the Sexual Compulsivity Scale (SCS; Kalichman & Rompa, 1995). As yet, sexual compulsivity has only been assessed with this scale among individuals who are members of “high risk” groups for HIV infection or who are HIV-positive. In this study, we found support for reliability and construct validity of the SCS in a sample of 876 heterosexual college students, a group not yet examined in the sexual addiction and compulsivity literature. Construct validity was substantiated by the presence of significant relationships of sexual compulsivity with frequencies of sexual behaviors and numbers of sexual partners. The scale was also related to gender and age. Sexual compulsivity scores were associated with frequency of risky sexual behaviors. The relationships between sexual compulsivity and solo, partner, public, and risky sexual behaviors remained significant when we controlled for demographic variables. Although we found support for construct validity of the SCS in our sample, it is not clear whether the scale distinctly measures sexual compulsivity or taps into other constructs, such as sexual desire and sexual exploration.

Recent studies suggest that sexual compulsivity is related to participation in sexual behaviors that are high risk for HIV infection (Benotsch, Kalichman, & Kelly, 1999; Kalichman, Greenberg, & Abel, 1997; Kalichman et al., 1994; Kalichman & Rompa, 1995; Kalichman & Rompa, 2001; Reece, Plate, & Daughtry, 2001). Sexual compulsivity has been defined as “an insistent, repetitive, intrusive, and unwanted urge to perform specific acts often in ritualized or routinized fashions” (Kalichman & Rompa, 1995, p. 587). Recently, some have conceptualized sexual compulsivity as a pattern of participation in sexually oriented activities in a manner that is persistent and escalating and that has the potential to result in negative consequences for self and others, or the drive to participate in such activities (National Council on Sexual Addiction and Compulsivity, 2004; Reece, 2003). Although substantial debate and skepticism surround the nature and existence of sexual compulsivity as a “pathological condition” (Levine & Troiden, 1988), the concept has been widely studied and measured in recent sexological, psychological, and public health research (Carnes & Adams, 2002). As yet, sexual compulsivity and its associations with HIV risk

behavior have only been assessed among those at high risk for infection or those who are HIV-positive.

Because the human immunodeficiency virus (HIV) is principally transmitted through sexual and intravenous drug use behaviors, public health researchers have examined factors related to sexual risk including substance use, sexual situations, and relationship features. Few early studies on HIV transmission considered the role of personality traits and their relation to sexual and risk behaviors. Researchers have begun to focus on individual characteristics, including the “propensity to prefer exciting, optimal, and novel stimulation or arousal” known as *sensation seeking* (Kalichman, et al., 1994, p. 387), and their relation to sexual behaviors that may place individuals at high risk for HIV infection. Recent attention to sexual compulsivity arose from an interest in sensation seeking as the potential cause for the continuation of high risk sexual behaviors despite their potentially harmful and lethal consequences.

In earlier studies, before the dawn of the HIV epidemic, Zuckerman (1979, 1994) found that sensation seeking was associated with participation in a number of behaviors including “potentially risky experiments, sports, vocations, criminal activities, sexual behavior, smoking, heavy drinking, drug use and abuse, reckless driving and driving under the influence of alcohol, and gambling” (Zuckerman & Kuhlman, 2000, p. 1001). At this time, risky sexual behavior was conceptualized as promiscuity, in which an individual did not properly compare, for example, “the possibilities of contracting a sexually transmitted disease against the possibility of a thrilling sexual encounter” (Zuckerman & Kuhlman, 2000, p. 1000). Kalichman et al. (1994) argued that traditional criteria for sensation seeking that were applied to sexual behaviors, including the Sensation Seeking Scale (Zuckerman, Kolin, Price, & Zoob, 1964), contained socioculturally outdated concepts and terminology that were not directly related to the sexual variables of interest.

New scales have subsequently been produced with the intention of measuring both sexual and nonsexual sensation seeking as well as sexual compulsivity as a separate and discrete phenomenon. Although the term sexual compulsivity to some extent overlaps with and has been used interchangeably with popular concepts such as *sexual addiction* (Carnes & Adams, 2002), *sexual impulsivity* (Barth & Kinder, 1987), and the established psychiatric diagnosis of *hypersexuality* (Montaldi, 2002), it has been most widely measured and studied as a distinct concept in relation to HIV risk behavior using the Sexual Compulsivity Scale (SCS; Kalichman & Rompa, 1995).

Originally designed in the mid-1990s to explore high risk sexual behaviors (e.g., unprotected anal intercourse) in samples of men who have sex with men (MSM), the SCS seeks to tap into underlying compulsive personality traits that could be linked to a resistance to sexual behavior change despite exposure to HIV prevention messages and interventions (Kalichman et al., 1994). The instrument asks respondents to indicate the extent of their agreement to 10 statements related to compulsive sexually intrusive thoughts, preoccupations, and behaviors (see Table 1). The statements were largely derived from a contemporary 12-step self-help manual for persons seeking recovery from so-called sexual addiction in clinical settings; specifically, these individuals complained of sexual control issues, problems managing their sexual behaviors and thoughts, or a possible belief that they might be sex addicts (CompCare, 1987; Kalichman & Rompa, 2001). Responses are given on a 4-point scale that ranges from 1 (*not at all like me*) to 4 (*very much like me*). Reliability of the SCS was originally found to be high ($\alpha = .89$) in a pilot convenience sample of self-identified homosexually active men (Kalichman et al., 1994). Higher levels of compulsivity were found to be positively related to psychological constructs such as loneliness, self-esteem, and sexual self-control. In this initial sample, however, the scale did not demonstrate

significant associations with high risk sexual behaviors (in terms of frequency of engaging in these behaviors).

Kalichman & Rompa (1995) used the scale in two separate convenience samples of gay men and inner-city, low-income, primarily African American men and women. The scale was internally consistent for both gay men ($\alpha = .86$) and inner-city men and women ($\alpha = .87$). Among gay men, sexual compulsivity was found to be significantly correlated with HIV risk behaviors (i.e., insertive and receptive anal intercourse without a condom). Among inner-city men and women, significant associations were also found between sexual compulsivity and HIV risk behaviors (i.e., vaginal intercourse without a condom, anal intercourse without a condom, masturbating a partner, and giving oral sex to a partner). The authors also found relationships between sexual compulsivity and substance use, commenting that many participants were recruited from agencies that serve people with substance abuse disorders. Thus, further research was recommended “to excavate varied expressions ... of sexual compulsivity in diverse populations” (Kalichman & Rompa, 1995, p. 599).

Several studies have measured sexual compulsivity in samples of HIV-positive individuals. Benotsch et al. (1999) recruited a sample of 112 HIV-positive self-identified gay and bisexual men through convenience sampling methods. Men living with HIV who scored higher in sexual compulsivity reported more frequent receptive and total unprotected anal and oral sex acts with more partners than those who scored lower on the scale. In a convenience sample of 287 primarily African American HIV-positive men and women recruited from community organizations, Kalichman & Rompa (2001) found relationships of sexual compulsivity with higher frequencies of reported sexual behaviors and higher numbers of sexual partners. Sexual compulsivity was also related to several markers of psychopathology (including trait anxiety, obsessive-compulsiveness, pessimism, depression, and borderline personality disorder) in men but not in women.

In summary, the SCS has demonstrated reliability and construct validity in several samples of individuals that can be classified as high risk for HIV, including MSM, substance abusers, and inner-city low-income men and women. The studies have also demonstrated that compulsivity was significantly related to sexual risk behaviors in these samples. However, the reliability, construct validity, and relevance of sexual compulsivity among more general populations, such as college students, have not yet been explored. There is also limited information on the relevance of sexual compulsivity to women since many previous studies have focused solely on samples of men. If sexual compulsivity is associated with high risk sexual behavior in more general populations, health professionals may need to integrate this into the ways in which HIV prevention, education, and care services are delivered.

The aim of this study was to determine the reliability and construct validity of the SCS in a previously neglected population, specifically heterosexual college students. To assess construct validity, we determined whether sexual compulsivity was related to higher frequencies of sexual behaviors and higher numbers of sexual partners. After establishing support for reliability and construct validity, we explored associations between sexual compulsivity and select demographic variables (gender, age, and ethnicity). Lastly, we ascertained whether sexual compulsivity was predictive of sexual behaviors considered risky in terms of HIV/STD infection.

Methods

Procedure

In January 2002, a sample of 899 college students ages 18 years or older completed a questionnaire in introductory health science classes at a large, public university in the

Midwestern United States. All classes used for recruitment were general elective courses that attracted a diverse cross-section of male and female college students. Coinvestigators at a university independent of where the data collection took place later analyzed the data. The study protocol materials were approved by the institutional review boards of Indiana University–Bloomington and the Columbia University Department of Psychiatry.

During the data collection process, a research assistant briefly described the survey and asked students to participate. Participants were told the study would investigate sexual attitudes and behaviors among college students. Participants completed questionnaires anonymously and placed them in a box in the front of the classroom when finished. We provided no incentives. Of the students who were enrolled in and attended the classes during data collection, a total of 94% responded to the survey ($n = 899$).

Measures

We constructed a survey for the purposes of data collection to assess a wide variety of sexuality-related variables. No identifying information, with the exception of broad demographic characteristics, was collected. We organized the variables in the following domains.

Demographics—Participants provided information related to their age, class standing, size of hometown, and relationship status, as well as their gender, sexual orientation or identity, and ethnicity.

Sexual compulsivity—We measured sexual compulsivity using the Sexual Compulsivity Scale (Kalichman & Rompa, 1995; see Table 1). Mean scores are based on responses to the 10-item scale, with a possible range from 1 to 4.

Sexual behaviors—Survey items measured participants' frequencies of various sexual activities with men and women, as well as numbers of male and female sex partners, in the past 3 months. We asked participants to report how many times and with how many partners they had engaged in a wide variety of sexual activities. The following subscales were created from individual variables to represent the frequency and variety of sexual activities: partner sex activities (kissing, fingering, rimming, mutual masturbation, vaginal intercourse, anal intercourse, and oral interaction); solo sex activities (masturbation alone, with toys, with sexually explicit videos, with sexually explicit computer images, with magazines, with an on-line computer partner, and with a phone partner); and public sex activities (sexual activity in a campus restroom, other public restroom, public park, car, locker-room, sauna, or other public or semipublic venue). We chose to examine public sex behaviors among heterosexual college students since previous studies have suggested that sexual compulsivity may be related to public sex but have only examined the phenomenon among MSM who engage in sex in public and commercial sex environments (Benotsch et al., 1999; Reece & Dodge, 2004a, 2004b; Reece & Dodge, 2003). Higher scores on each subscale represent a greater frequency of participation in the various sexual activities and, in the case of partner sex and public sex, with a greater number of sexual partners. We determined reliability of the sexual behavior subscales to be acceptable for partner sex ($\alpha = .76$), solo sex ($\alpha = .73$), and public sex ($\alpha = .68$).

The survey also measured frequencies of protected and unprotected anal, vaginal, and oral sex. We created sub-scales to assess risky sex, in terms of possible HIV/STD infection, for men (number of partners and times for unprotected oral sex and unprotected insertive vaginal and anal intercourse) and for women (number of partners and times for unprotected oral sex and unprotected receptive vaginal and anal intercourse). Reliability of the risky

sexual behavior subscales was determined to be acceptable for men ($\alpha = .75$) and for women ($\alpha = .76$).

Analyses

Data analyses included descriptive and inferential statistical techniques and were conducted in several steps. First, we assessed reliability of the SCS. Next, where appropriate, we used Spearman's correlations, analyses of variance (ANOVAs), independent-samples *t* tests, and Pearson's correlations to determine the construct validity of the scale as well as to explore the potential bivariate relationships between sexual compulsivity and select demographic variables (gender, age, ethnicity, and sexual relationship status). Using Pearson's correlations, we examined the association between sexual compulsivity and risky sexual behaviors and we employed univariate ANOVAs to investigate the relationships between the SCS and specific sexual activities (solo sex, partner sex, public sex, and risky sex) while controlling for select demographic variables.

Results

A total of 899 participants responded to the survey. We analyzed data from 876 self-identified heterosexual participants (Table 2). We excluded 15 bisexual, 6 gay, and 1 questioning participant since low response rates of non-heterosexual individuals prohibited further analyses and comparisons based on sexual orientation or identity. The sample consisted of 37% men ($N = 325$) and 63% women ($n = 551$). The mean age was 20.2 years ($SD = .87$). Eighty-nine percent identified as White ($n = 777$), 5% as Black ($n = 45$), and the remaining 6% as other ethnicities ($n = 54$). These demographics closely approximated the overall composition of the student body of the university from which the sample was drawn (mean age = 20.3, 89% White, 5% Black).

In terms of sexual relationship status, 46% ($n = 397$) of the total participants reported currently being in an exclusive sexual relationship (that is, a relationship in which the two individuals engage in sexual activity exclusively with each other). An additional 21% ($n = 183$) reported current involvement in nonexclusive sexual situations (either currently maintaining multiple intimate relationships with several different sexual partners or currently engaging in sexual activity with multiple partners but not maintaining any sort of intimate relationship). The remainder of the participants (33%, $n = 288$) reported not being currently sexually active.

We found a significant relationship between gender and sexual relationship status, $\chi^2 (2, n = 876) = 45.02, p < 0.001$. Women were significantly more likely to report being in exclusive sexual relationships (52%, $n = 281$) than men (36%, $n = 116$). Men were also significantly more likely to report current involvement in nonexclusive sexual situations (33%, $n = 106$) than were women (14%, $n = 77$). We did not find significant differences between men and women in terms of age and ethnicity.

Reliability

We determined that the reliability of the Sexual Compulsivity Scale was high in the total study sample ($\alpha = .82$). In addition, we found high reliability for the subgroups of male participants ($\alpha = .77$) and female participants ($\alpha = .81$) within the sample. All item-total correlations were .40 or higher (see Table 1).

Construct Validity

We found a significant relationship between sexual compulsivity and partner sex activities, $r(876) = 0.14, p < 0.001$ (see Table 2). Individuals who reported a broader range of partner sex activities with higher frequencies had higher sexual compulsivity scores.

A significant relationship between solo sex activities and sexual compulsivity also emerged, $r(876) = 0.38, p < 0.001$. Participants who reported a broader range of masturbatory activities with higher frequencies were more likely to have higher sexual compulsivity scores.

The data also revealed a significant relationship between public sex activities and sexual compulsivity, $r(876) = 0.24, p < 0.001$. Participants who reported a broader range of public sex activities with higher frequencies were more likely to have higher sexual compulsivity scores.

Lastly, we found a significant association between sexual compulsivity and self-reported sexual relationship status, $F(2, 865) = 31.37, p < 0.001$. Tukey HSD post-hoc analyses revealed that participants who reported current involvement in nonexclusive sexual situations ($M = 1.64, SD = .39$) were significantly more likely to have higher sexual compulsivity scores than those who reported exclusive sexual relationships ($M = 1.40, SD = .35$) and those who reported not being currently sexually active ($M = 1.39, SD = .37$).

The relationships between solo, partner, and public sex activities and sexual compulsivity all remained significant when we controlled for demographic variables (Table 3).

Demographics

We found a significant difference between men and women in terms of sexual compulsivity scores, $t(876) = 12.63, p < 0.001, d = .81$ (Table 2). Mean scores of sexual compulsivity were higher for men ($M = 1.64, SD = .40$) than for women ($M = 1.33, SD = .32$).

A significant relationship was also present between sexual compulsivity scores and age. As age decreased, participants were more likely to have higher mean scores of sexual compulsivity, $r(876) = 0.13, p < 0.001$. Results did not reveal significant differences in levels of sexual compulsivity when groups were compared by ethnicity.

Risky Sexual Behaviors

Sexual compulsivity was positively related to sexual behaviors considered to be risky in terms of HIV/STD infection for both male and female participants (Table 2). Men and women who had higher sexual compulsivity scores were more likely to have engaged in unprotected oral, vaginal, and anal sex in the preceding 3 months, respectively $r(325) = 0.24, p < 0.001$ and $r(551) = 0.16, p < 0.001$. The relationship between risky sexual behaviors and sexual compulsivity remained significant when we controlled for demographic variables (Table 3).

Discussion

As in studies of high risk individuals and those living with HIV, sexual compulsivity appears to be a relevant construct for describing elevated levels of sexual practices with multiple partners in our sample of heterosexual college students (Kalichman & Rompa, 1995, 2001). The SCS was determined to have high reliability. We found support for construct validity in the results showing that individuals who reported higher frequencies of partner sex, solo sex, and public sex activities were more likely to have higher sexual compulsivity scores. Additionally, participants who reported involvement in nonexclusive

sexual situations (i.e., multiple sexual partners) were more likely to have higher sexual compulsivity scores than those who reported involvement in exclusive sexual relationships and those who were not currently sexually active. Given reliability and construct validity, we found significant relationships between sexual compulsivity and gender and age. Lastly, in relation to HIV/STD risk, men and women who had higher sexual compulsivity scores were more likely to report higher frequencies of unprotected oral, vaginal, and anal sex in the preceding 3 months.

The limitations of our study must be considered while interpreting the results. As with all previous research using the SCS, our findings are based on a convenience sample that cannot be considered representative. The focus of our study was heterosexual college students, and it is possible that college students may respond differently to a questionnaire on human sexuality than their peers who do not attend college. Thus, generalization of the findings beyond this sample must be done with caution.

As with the majority of research on human sexual behavior, the use of self-report questionnaires may create a source of bias in that participants may exaggerate the frequency of sexual activities, underreport the frequency of sexual activities, misunderstand a question due to lack of knowledge and respond inaccurately, or answer questions in ways that they feel are socially desirable. However, previous work also suggests that survey measures of self-report can be valid and reliable in sexuality research (Turner, Miller, & Rogers, 1997).

Table 4 situates our study within the previous literature exploring the SCS in other samples; it shows that in our study, sexual compulsivity scores for heterosexual male college students were within the lower range of scores and scores for heterosexual female college students were relatively lower in comparison to other studies. It is notable that in all of these samples, as in ours, mean scores on the SCS were significantly higher among men than women. Additionally, SCS scores were especially elevated in a sample of primarily ethnic minority gay and bisexual men (2.06, $SD = .61$, Reece, 2003) and men living with HIV (2.05, $SD = .64$, Reece et al., 2001). While gender may be a potential explanatory factor for higher compulsivity scores in these samples, the higher scores may also be due to the fact that individuals in these two samples had identified a level of psychological distress that resulted in their enrollment in mental health care programs.

As with high risk samples, sexual compulsivity was a predictor of unprotected sexual activity in our study, although correlations between sexual compulsivity scores and several sexual behavior variables were relatively low. It is still not understood how sexual compulsivity functions in relation to sexual risk after the concept has been identified and measured. Zuckerman and Kuhlman (2000) presented a “biosocial model” to better explain risk taking (including sexual), in which they hypothesized that risk taking is related to impulsive sensation seeking, aggression, and sociability as well as several biological traits associated with general risk taking and sensation-seeking personality. This work has implications for sexual compulsivity in that it could lead to a deeper understanding of its causes and potential treatments; however, such a theoretical model has not yet emerged for sexual compulsivity and related sexual risk-taking behavior.

Several of the substantive findings in our study are interesting and deserve deeper exploration. For example, the SCS was more highly correlated with solo sex activities than with partner sex or public sex activities. In other words, it appears that sexual compulsivity is more successful in predicting masturbatory behaviors than partner or public sex behaviors. The reason for this may be that masturbatory behaviors are, by nature, intrapersonal and usually not dependent on other individuals, while partner and public sex behaviors are. Although the solo sex activities we assessed may involve other individuals, such as those

with an on-line partner or telephone partner, these require less personal interaction and commitment than sexual activities involving “real time” sexual partners.

The relationships of sexual compulsivity with gender and age in our sample also warrant further discussion. We found that mean scores for sexual compulsivity were significantly higher for male participants than female participants. Kalichman and Rompa (1995, 2001) found similar results in samples of primarily African American HIV-positive men and women and inner-city participants. In addition, younger participants in our sample had higher sexual compulsivity scores than older participants. These findings raise the question of whether the SCS, despite its construct validity and the face validity of the scale items, actually measures sexual compulsivity or if it taps into other constructs, such as sexual desire and sexual exploration, as well.

Differences in sexual compulsivity scores between men and women resemble broader gender differences found in sexuality research that suggest a stronger sexual desire in men. Women have reported less frequent masturbation, less accepting attitudes toward casual sexual encounters, and less consistency in orgasms than men in select samples (Hyde & DeLamater, 2000). These gender differences have been interpreted in the context of not only the wide array of biological differences between men and women but also the numerous and complex gender-related socio-cultural factors that shape human sexuality, including restrictive sex roles and double standards traditionally ascribed to female sexuality.

Differences in compulsivity scores by age resemble differences in human sexual desire across the life course, which we believe may be developmental in nature. Hyde and DeLamater (2000) suggest that roughly between the ages of 13 and 19, “[a] surge of sexual interest occurs around puberty and continues through adolescence ... [H]eightened sexual arousal may be caused by a number of factors, including bodily changes and an awareness of them, rises in levels of sex hormones, and increased cultural emphasis on sex and rehearsal for adult gender roles” (p. 293). The interaction of biological and especially social factors during the early college years (including dormitory living, mass media, and new opportunities in the vast sexual landscape of the university setting) reinforce that age is related to sexual desire.

Thus, the extent to which the SCS captures constructs other than sexual compulsivity, including sexual desire and sexual exploration, is not clear. Heterosexual college students in particular are a population with easy access to multiple sexual partners and a wide array of sexual opportunities. The university atmosphere itself often encourages and promotes a sense of social and sexual exploration among students (Strong, DeVault, Sayad, & Yarber, 2005, p. 191). What may appear to be pathological compulsive sexual behavior to researchers and health professionals may actually be experienced as normal sexual exploration by college students. Recent studies on sexual behaviors of college students, including the college ritual of “hooking up,” suggest that researchers must be keenly aware that meanings of various forms of sexual expression may be unique to college students themselves (Sanders & Reinisch, 1999).

Considering this, future studies are needed to determine the practical significance of sexual compulsivity among heterosexual college students and various other populations. These studies should evaluate the presence of actual negative health outcomes in individuals who score higher on measures of sexual compulsivity and who engage in more frequent sexual risk behaviors so that health professionals may develop and tailor HIV/STD education and intervention efforts as needed. Researchers should also design, test, and refine potential therapeutic treatments and interventions for sexual compulsivity, if it is determined to exist as a clinical condition through further sociomedical inquiry. Last, although one of the aims

of our study was to focus solely on self-identified heterosexual college students, we acknowledge that further research is needed to explore the significance of sexual compulsivity for diverse samples of bisexual men and women, gay men, lesbians, transgenders, and other individuals to determine if they have different issues and needs than do high risk gay men and men who have sex with men or heterosexual individuals.

Acknowledgments

Support for this project was provided by funds from the William L. Yarber Professorship in Sexual Health, awarded to the second author. During the production of this manuscript, the first author acknowledges support in the form of Center Grant P30 MH43520 from the National Institute of Mental Health to the HIV Center for Clinical and Behavioral Studies, Anke A. Ehrhardt, Ph.D., Principal Investigator, and NRSA T32 MH19139, Behavioral Sciences Research in HIV Infection, Anke A. Ehrhardt, Ph.D., Program Director.

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Table 1The Sexual Compulsivity Scale^a: Reliability in Our Sample ($\alpha = .82$)

Item	Item-total correlation
My sexual appetite has gotten in the way of my relationships.	.46
My sexual thoughts and behaviors are causing problems in my life.	.52
My desires to have sex have disrupted my daily life.	.60
I sometimes fail to meet my commitments and responsibilities because of my sexual behaviors.	.44
I sometimes get so horny I could lose control.	.50
I find myself thinking about sex while at work.	.53
I feel that sexual thoughts and feelings are stronger than I am.	.57
I have to struggle to control my sexual thoughts and behavior.	.62
I think about sex more than I would like to.	.45
It has been difficult for me to find sex partners who desire having sex as much as I want to.	.41

^aKalichman & Rompa, 1995.

Table 2

Description of the Sample, Sexual Compulsivity, and its Relation to Demographic and Behavioral Variables

Variable	N(%)	Mean (SD)	Range	Sexual compulsivity mean (SD)	F/t/r
Gender					
Male	325 (37.1)			1.64 (0.40)	
Female	551 (62.9)			1.33 (0.32)	
Age		20.20 (0.87)	18.00–25.00		$t = 12.65^{***}$
Ethnicity					$r = 0.13^{***}$
White	777 (88.7)			1.45 (0.38)	
Black	45 (5.1)			1.39 (0.39)	
Other	54 (6.2)			1.53 (0.44)	
Sexual relationship status					$F = 1.74$
Exclusive	397 (45.7)			1.40 (0.35)	
Nonexclusive	183 (21.1)			1.64 (0.39)	
Not sexually active	288 (33.2)			1.39 (0.37)	
Sexual behaviors					$F = 31.37^{***}$
Solo sex (1.0–7.0)		1.55 (0.66)	1.00–5.00		$r = 0.38^{***}$
Partner sex (1.0–7.0)		2.40 (0.84)	1.00–4.86		$r = 0.14^{***}$
Public sex (1.0–6.0)		1.18 (0.31)	1.00–3.33		$r = 0.24^{***}$
Risky sexual behaviors					
Unprotected oral, vaginal, anal sex (male, 1.00–6.00)	1.57 (0.56)	1.00–5.00		$r = 0.24^{***}$	
Unprotected oral, vaginal, anal sex (female, 1.00–6.00)	1.68 (0.64)	1.00–4.50		$r = 0.16^{***}$	

* $p < 0.05$.** $p < 0.01$.*** $p < 0.001$.

Table 3

Analyses of Variance for Sexual Activities and Sexual Compulsivity Scores, Controlling for Demographic Variables

Independent variables	df	MS	F	Adjusted R ²
Solo sex activities	21	0.65	6.13***	
Gender	1	1.71	16.13***	
Age	1	0.36	3.35	
Ethnicity	1	0.04	0.34	
Not sexually active vs. others	1	0.04	0.40	
Nonexclusive vs. others	1	2.14	20.19***	
				0.28
Partner sex activities	33	0.26	2.29***	
Gender	1	12.25	107.56***	
Age	1	0.37	3.26	
Ethnicity	1	0.06	0.56	
Not sexually active vs. others	1	0.48	4.29*	
Nonexclusive vs. others	1	4.34	38.13***	
				0.22
Public sex activities	18	0.67	6.13***	
Gender	1	11.36	104.27***	
Age	1	0.99	9.11**	
Ethnicity	1	0.07	0.67	
Not sexually active vs. others	1	0.06	0.55	
Nonexclusive vs. others	1	2.48	22.67***	
				0.24
Risky sexual activities (male)	18	0.35	11.66***	
Gender	1	7.42	66.24***	
Age	1	0.41	3.62**	
Ethnicity	1	0.01	0.04	
Not sexually active vs. others	1	4.16	37.06**	
Nonexclusive vs. others	1	0.35	3.13**	
				0.22
Risky sexual activities (female)	18	0.45	12.35***	
Gender	1	12.83	117.28***	
Age	1	0.23	2.12	
Ethnicity	1	0.05	0.42	
Not sexually active vs. others	1	4.20	38.39***	

Independent variables	<i>df</i>	<i>MS</i>	<i>F</i>	Adjusted <i>R</i> ²
Nonexclusive vs. others	1	0.66	6.03**	0.24

*
 $p < 0.05$.

**
 $p < 0.01$.

 $p < 0.001$.

Table 4

Reported Mean Scores on the SCS Across Recent Studies

Previous studies	Description of sample	Reported mean scores (<i>SD</i>) on sexual compulsivity scale ^a	
		Men	Women
This study	Heterosexual college students	1.64 (.40)	1.33 (.32)
Reece, 2003	MSM living with HIV	2.06 (.61)	n/a
Benotsch, Kalichman, & Kelly, 1999	MSM living with HIV	1.87 (.66)	n/a
Reece, Plate, & Daughtry, 2001	Individuals living with HIV	2.05 (.64)	1.61 (.39)
Kalichman & Rompa, 2001	Individuals living with HIV	1.60 (.63)	1.40 (.64)
Benotsch, Kalichman, & Pinkerton, 2001	Individuals living with HIV	1.64 (.63)	1.42 (.64)
Kalichman & Rompa, 1995	Low-income individuals	1.87 (.72)	1.51 (.55)
Parsons, Bimbi, & Halkitis, 2001	Gay/bisexual male sex workers	1.92 (.69)	n/a
Reece & Dodge, 2004a	MSM/MSMW campus cruisers	1.80 (.43)	n/a
<u>Men and women combined</u>			
Cooper, Delmonico, & Burg, 2000	Internet users	1.76 (.62)	

Note. 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.

^aKalichman & Rompa, 1995.