

Sexual Victimization Among Male College Students: Assault Severity, Sexual Functioning, and Health Risk Behaviors

Jessica A. Turchik

Veterans Affairs Palo Alto Health Care System and Stanford University Medical School

The purpose of this study was to examine the relationship between college men's sexual victimization experiences, engagement in a number of health risk behaviors, and sexual functioning. The study also examined sexual victimization by assault severity categories and utilized a multiitem, behaviorally specific, gender-neutral measure. Three hundred and two male college students were recruited for the current study from a midsized Midwestern university. Of these men, 51.2% reported at least one sexual victimization experience since age 16. The multivariate analysis of variance (MANOVA) results suggested that male sexual victimization is related to increased weekly alcohol consumption, increased problematic drinking behaviors, increased tobacco use, increased sexual risk-taking behaviors, and increased number of reported sexual functioning difficulties. Each of these problematic behaviors was greater among those who reported rape compared to no victimization, and some differences were also found in relation to the sexual contact and sexual coercion groups. These findings have important implications in sexual assault prevention and risk-reduction programming.

Keywords: male victimization, sexual assault, risk-taking behavior, sexual functioning, college, substance use

Although the majority of adult sexual crimes are committed by men against women, other forms of sexual assault, such as those perpetrated against men, are often ignored. It is estimated that approximately 3% to 8% of American and British men have experienced an adulthood incident of sexual assault in their lifetime (Coxell, King, Mezey, & Gordon, 1999; Elliott, Mok, & Briere, 2004; Sorenson, Stein, Siegel, Golding, & Burnam, 1987; Tjaden & Thoennes, 2006; U.S. Department of Justice, 2000). Many male college students appear to have a history of sexual victimization with reported rates of experiencing unwanted sexual contact ranging from 18.5% to 31% in the past year or academic year (O'Sullivan, Byers, & Finkelstein, 1998; Larimer, Lyndum, Anderson, & Turner, 1999;

Palmer, McMahon, Rounsaville, & Ball, 2009), 34% to 58% when asking students to provide information since age 16 (Struckman-Johnson & Struckman-Johnson, 1994; Struckman-Johnson, Struckman-Johnson, & Anderson, 2003), and up to 70% when students provide victimization experiences for the past 5 years (Fiebert & Tucci, 1998). Although it is clear that sexual coercion is common among male undergraduates, studies that assess male sexual victimization in college students have used a variety of definitions and measures of sexual victimization, which makes it difficult to compare across studies.

Although research has demonstrated the potential negative mental and physical health effects of male sexual victimization (e.g., Burnam et al., 1988; Ratner et al., 2003; Tewksbury, 2007; Walker, Archer, & Davies, 2005a), only a few studies have examined such issues among college students. A recent study revealed that college male victims (who reported either childhood or adult sexual victimization) reported increased adulthood posttraumatic stress, hostility, depression, and general distress symptoms (Aosved, Long, & Voller, in press). Another study found that college men who reported being victims of sexual coercion endorsed a

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Jessica A. Turchik, VA Palo Alto Health Care System, National Center for PTSD; Department of Psychiatry and Behavioral Sciences, Stanford University Medical School. Research for this article was conducted while the author was at Ohio University.

Correspondence concerning this article should be addressed to Jessica A. Turchik, VA Palo Alto, 795 Willow Road, MPD PTSD -324, Menlo Park, CA 94025. E-mail: jturchik@stanford.edu

greater number of depressive symptoms and increased alcohol consumption compared with those men who did not report any coercion (Larimer et al., 1999). Similarly, a recent study by Palmer et al. (2009) found that college men who reported experiencing unwanted sexual contact reported greater alcohol use, fewer protective drinking-related strategies, and a greater number of negative alcohol-related consequences. Although Tewksbury and Mustaine (2001) found that drug use variables were related to sexual victimization experiences in male college students, they failed to find a relationship with alcohol use. Although other studies have demonstrated that college men generally do not rate the consequences or their reactions to a unwanted sexual experience as highly negative, (e.g., Banyard et al., 2007; Krahé, Scheinberger-Olwig & Bieneck, 2003; Struckman-Johnson, 1988; Struckman-Johnson & Struckman-Johnson, 1994), it is unclear how accurate or willing men would be in self-reporting that unwanted sexual contact, especially from women, caused negative sequelae. Given college students' high level of male rape myth acceptance (Chapleau, Oswald, & Russell, 2008; Struckman-Johnson & Struckman-Johnson, 1992), particularly when women are the perpetrators, it is likely that men may not be forthcoming about issues related to sexual victimization. Further studies that use comparisons of victimized and nonvictimized college men are needed in which the variables of interest are not presented to participants as being directly linked to the victimization experience.

The association between male sexual victimization and greater alcohol use, drug use, and alcohol-related consequences (Larimer et al., 1999; Palmer et al., 2010; Tewksbury & Mustaine, 2001) suggests that other health risk behaviors may also be associated as has been found among college women who report sexual assault (e.g., Brener, McMahon, Warren, & Douglas, 1999; Gidycz, Orchowski, King, & Rich, 2008). In a large sample of sexually active boys in 8th to 12th grades from Vermont, sexual victimization was found to be associated with a number of sexual risk behaviors: earlier initiation of sexual activity, greater number of male and female sexual partners in the past 3 months, not using a condom during last intercourse, and being involved in more pregnancies (Shrier, Pierce, Emans, & DuRant, 1998). College men are

already a high-risk group for a number of health risk behaviors, including alcohol consumption, problem alcohol-related behaviors, drug uses, smoking, and sexual risk taking behaviors (e.g., Johnston, O'Malley, Bachman, & Schulenberg, 2007; Levinson et al., 2007; Ravert et al., 2009; Turchik & Garske, 2009; Weitzman, 2004), therefore given the potential negative consequences (e.g., unintended pregnancy, sexually transmitted infections, increased medical visits, increased risk of revictimization, legal and financial consequences) of these behaviors, it is important to examine whether victimization status further increases men's risk for engaging in risky behaviors.

Few studies have tested theoretical explanations of male sexual assault (see Tewksbury & Mustaine, 2001, for an exception); however, given that the demonstrated and hypothesized relationships between sexual victimization and health risk behaviors in college men are similar to those of college women, the theoretical explanations posited for this relationship among female victims may also apply to men victims. The posited theorized relationships between sexual victimization and health risk behaviors can be summarized as the following: (a) men who engage in health risk behaviors are more at risk to be victimized (due to impairment in judgment, greater exposure to assailants, viewed as an easier target by perpetrators); (b) men who are victimized are subsequently more likely to engage in health risk behaviors (way to psychologically cope, distract oneself, or self-medicate); or (c) there is a reciprocal relationship between these variables and victimization (see Champion et al., 2004, and Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997, for discussion of these relationships). For instance, a man who is sexually victimized may subsequently experience depression or other psychological problems and begin binge drinking and partying to distract himself. Alternatively, a man who abuses substances and goes home with strangers for sex may be at increased risk to be exposed to potential assailants and be less likely to be able to successfully resist an attack. Kilpatrick et al. (1997) tested these three possible hypotheses in relation to substance abuse and sexual victimization among a sample of 3,006 women and found support for a reciprocal relationship. Although such explanations are helpful in understanding the

potential relationships between sexual victimization and health risk behaviors in men, it is likely that there are sex-specific variables that may be important. For instance, many male victims struggle with issues related to masculinity and sexual orientation (e.g., Walker, Archer, & Davies, 2005b) as being a victim is not consistent with society's heterosexual masculine ideal (Lisak, 1993). Such issues may lead men to be more likely to engage in health risk behavior to cope rather than disclosing their experience or seeking treatment as prior research has indicated that college men are less likely to disclose unwanted sexual contact or seek services for sexual victimization compared to college women (Banyard et al., 2007). Similarly, victims' beliefs in male rape myths or encountering others with such beliefs (e.g., men cannot be raped, men who are raped are homosexual) may also be strongly influential in determining men's reaction to sexual victimization (see Turchik & Edwards, *in press*).

Another area of importance for male sexual assault victims is sexual functioning, and although few researchers have examined this issue among this group, sexual concerns have been noted to perhaps be "among the most severe and longest lasting consequences for victimized men" (Tewksbury, 2007, p. 31). Unlike health risk behaviors, it is generally theorized that sexual dysfunction is a consequence of sexual victimization, although it is unclear whether it is a direct consequence, related to increases in health risk behaviors such as substance abuse, or is related to psychological sequelae such as depression. One study of community men found that those who reported sexual victimization reported a greater number of dysfunctional sexual behavior symptoms on the Trauma Symptom Inventory compared to those without a victimization history (Elliot, Mok, & Briere, 2004). No studies have specifically examined sexual functioning in male college students, although Struckman-Johnson and Struckman-Johnson (1994) did include a measure of sexual well-being—which included three subscales measuring sexual self-esteem, sexual depression, and sexual preoccupation—and did not find differences between men who had experienced sexual coercion and those who did not. Further exploration of the relationship between sexual victimization and sexual functioning is needed as it is currently un-

known if this is a problem associated with assault for young college men. Such a finding could have implications for their desire to seek romantic relationships and satisfaction within these relationships.

The goal of this study was to build on existing research to examine the relationship between college men's sexual victimization status and their engagement in a number of risky health behaviors (alcohol consumptions, problem drinking behaviors, drug use, sexual risk taking) and sexual functioning (sexual desire and sexual functioning problems). Given that little research has examined health risk factors related to college men's sexual victimization and no prior studies have examined sexual risk taking or functioning variables, this study sought to further the current understanding of factors related to male sexual victimization. The study also measured each of these constructs without linking the questions to an assault experience and measured all of these constructs before assessing sexual victimization so that participants would not be influenced by their responses to the sexual victimization items. Further, this study sought to examine sexual victimization by severity and broke sexual victimization status into four categories based on the severity of the "worse" victimization experience (i.e., no victimization, unwanted sexual contact, sexual coercion, and rape), rather than only comparing victims to nonvictims, which is more consistent with the way victimization is often measured for women (i.e., Koss et al., 2007; Koss, Gidycz, & Wisniewski, 1987). The chosen measure of sexual victimization was gender neutral, behaviorally specific, included a range of potential coercive tactics and sexual acts, and included substance abuse-related assault as recommended by experts in the field of sexual victimization (Koss et al., 2007; Struckman-Johnson, Struckman-Johnson, & Anderson, 2003). It was hypothesized that men who reported sexual victimization would report more frequent engagement in the health risk behaviors, more sexual functioning problems, and lower sexual desire, and that endorsement of these variables would be highest among those with more severe victimization experiences.

Method

Participants

Participants were 302 undergraduate men, from a medium-sized Midwestern University, the majority of whom were between the ages of 18 to 23 ($M = 19.2$). The majority of the participants indicated they were heterosexual (95.7%), Caucasian (92.4%), Christian (85%), never married (100%), had parents' whose annual incomes were over \$50,000 (74.7%), and were in their first or second year of college (83.4%). Approximately 56.3% of the students reported that they were not in any kind of romantic relationship, 22.9% were in a dating relationship, and 20.6% were in a long-term monogamous relationship of 6 months or longer. Most of the participants (85.4%) reported having consensual sexual experience (previous oral, anal, or vaginal sex). Three participants had a significant amount of missing data (i.e., only completing the demographics) and were removed from the analyses leaving a total sample of 299. There was very little missing data (less than 5%) in the current study and missing data was handled using multiple imputation prior to data analyses.

Measures

Demographics. Participants completed several questions regarding their age, year in school, ethnicity, religion, sexual orientation, past sexual behavior, marital status, dating status, and parents' annual income.

Sexual functioning. An item was constructed and used to obtain a count of sexual functioning problems (during solitary and/or dyadic situations). Participants were asked: "Do you experience any of the following sexual problems at least 25% of the time during sexual situations?". Participants were asked to circle all of the sexual problems that applied to them. The seven problems were based on the seven sexual dysfunction disorders as categorized in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision (American Psychiatric Association, 2000): lack of sexual desire, difficulty getting or maintaining an erection, premature ejaculation, inability to ejaculate, lack of orgasm, aversion to sexual contact, and pain associated with sex. A total

sexual dysfunction score was derived based on a total count of endorsed problems, with a score range from 0 to 7.

Sexual desire. The Sexual Desire Inventory (SDI; Spector, Carey, & Steinberg, 1996) was used to assess both dyadic and solitary sexual desire. The SDI is a cognitive self-report measure that explores the strength of a person's sex drive and the desired frequency of sexual behavior rather than the frequency of actual behavior. Factor analysis has supported the existence of two factors: a dyadic (8 items) and a solitary (3 items) factor (Spector et al., 1996). Examples of items include "During the last month, how often have you had sexual thoughts involving a partner?" with responses ranging from "0 - Not at all" to "7 - Many times a day" on the dyadic subscale and "How important is it for you to fulfill your desire to behave sexually by yourself?" with responses ranging from "0 - Not at all Important" to "8 - Extremely Important" on the solitary subscale. Item scoring differs depending on the item but higher scores represent higher level of sexual desire and can be calculated by summing the items. Dyadic desire scores range from 0 to 62 and solitary scores range from 0 to 23. The internal consistency for the dyadic and solitary desire scale alphas for the current study were .87 and .86, respectively.

Substance use. All the substance use variables were assessed using the Drinking and Drug Habits Questionnaire (DDHQ; Collins, Parks, & Marlatt, 1985). The 31-item DDHQ assessed participants' substance use employing standardized definitions of what constitutes a drink (e.g., one 4 oz. glass of wine). Participants' report the number of drinks they have each day of an average week and these numbers which range from "0" to "11 or more" are used to calculate a weekly drinking score which ranges from 0 to 77. A second subscale assessed problem drinking behaviors, such as getting sick after drinking and getting DWIs from drinking and driving, which was answered "yes" or "no" with a score range of 0 to 9. A third subscale assessed drug use by asking participants about their usage of 13 different drugs (e.g., marijuana, opiates, cocaine, inhalants) on a 4-point "never used" to "regularly use" scale with a score range of 0 to 39 with a fourteenth question used to assess tobacco use on the same 4-point scale with a score range of 0 to 3. In the

current study, the internal consistency alphas for the weekly alcohol, problem drinking behaviors, and drug use subscales were .78, .73, and .72, respectively.

Sexual risk-taking behavior. The 23-item Sexual Risk Survey (SRS; Turchik & Garske, 2009) was used to assess the frequency of sexual risk behaviors in the past six months. All items pertain to the actual participant's behavior over the past six months and the scale was designed for college students with or without sexual experience. The survey measures a broad range of sexual behaviors and each item is scored 0 to 4 with a possible scale total range of 0 to 92, with higher scores indicating greater risk taking. The SRS, for example, asks participants to write the number of times they had "hooked up" but not had sex with someone you didn't know or didn't know well", "had anal sex without a condom", and "had vaginal intercourse without protection against pregnancy." The total score of the SRS can be used or five subscale scores can be calculated; both the total score and the subscale scores were used in the current study. The SRS has evidenced convergent and discriminant validity as well as good internal consistency and test-retest reliability (Turchik & Garske, 2009). In the current study, the internal inconsistency reliability was .90 for the total SRS score and .87, .81, .80, .90, and .58 for the Sexual Risk Taking with Uncommitted Partners, Risky Sex Acts, Impulsive Sexual Behaviors, Intent to Engage in Risky Sexual Behaviors, and Risky Anal Sex Acts subscales, respectively.

Sexual victimization. Sexual victimization was assessed using the Sexual Coercion Tactics Scale (SCTS), which assesses sexual coercion used by and used on both men and women since the age of 16 years (Struckman-Johnson et al., 2003). These surveys ask participants to indicate how many times they have either used coercive tactics to get someone to engage in sexual behaviors or how many times they engaged in sexual behaviors because someone used these tactics on them and the gender of the other person involved. There were 18 different tactics that were listed for each of three types of sexual acts (sexual behavior, oral sex, and anal-vaginal sex) on both forms (whether they were the user or recipient of the tactics) of the survey. Only male victimization was used in this

study, both by male and female perpetrators. Victimization status was broken down into four victimization categories consistent with studies of female sexual victimization (Koss et al., 1987, 2007): no victimization, unwanted sexual contact, sexual coercion, and rape (see Table 1). In this study, the internal consistency reliability alphas of the SCTS across the four categories for both male and female perpetrators ranged from .70 to .85.

Procedure

Participants were recruited from undergraduate psychology courses and volunteered through an online experiment scheduling system, participating for partial class credit. The study was advertised as a research project that examined numerous social, health, and personality factors. This study was part of a larger study focused on measure validation that is described in detail elsewhere (Turchik & Garske, 2009). Participants gave informed consent and the research was conducted in compliance with the university's Institutional Review Board. Participants were administered paper-and-pencil surveys in small group settings, and they returned the surveys in a manila envelope to the researcher. Measures were given in a fixed order and were self-administered. Because of the sensitive nature of the study material, a clinical psychology graduate student was available during all study sessions in case participants experienced distress; however, no participants exhibited or reported any problems or distress related to taking part in the study. Each participant received a debriefing form, which included local resources for sexual education, STI and pregnancy testing, and counseling services.

Data Analyses

Pearson's bivariate correlations were examined for sexual victimization status (coded as 0 = none, 1 = unwanted sexual contact, 2 = sexual coercion, and 3 = rape) and all of the health risk and sexual functioning variables included in the analyses described below. Two one-way multivariate analyses of variance (MANOVAs) were used to test the effect of victimization status (none-unwanted sexual contact-sexual coercion-rape) on

Table 1
Items Used to Measure Sexual Victimization by Type and Victimization Frequencies

Unwanted sexual contact	Sexual coercion	Rape
Frequency = 21.7%	Frequency = 12.4%	Frequency = 17.1%
Engaged in unwanted sexual behavior (kissing, fondling, petting) but not sex with someone because he or she:	Engaged in unwanted oral, vaginal, or anal sex with someone because he or she:	Engaged in unwanted oral, vaginal, or anal sex with someone because he or she:
Tried to talk you into it repeatedly	Tried to talk you into it repeatedly	Took advantage of you being drunk or high
Told a lie	Told a lie	Purposely gave you drugs or alcohol
Questioned your sexuality	Questioned your sexuality	Blocked your retreat
Said there must be something wrong with you if you didn't	Said there must be something wrong with you if you didn't	Used physical restraint
Threatened to break up with you	Threatened to break up with you	Tied you up
Threatened to blackmail you	Threatened to blackmail you	Threatened to physically harm you
Threatened to harm themselves	Threatened to harm themselves	Threatened you with a weapon
They used their authority or position	They used their authority or position	
Took advantage of you being drunk or high		
Purposely gave you drugs or alcohol		
Blocked your retreat		
Used physical restraint		
Tied you up		
Threatened to physically harm you		
Threatened you with a weapon		

health risk behavior engagement and sexual functioning. The first MANOVA was used to examine the risk-taking variables (weekly drinking amount, problematic drinking behaviors, smoking, drug use, sexual risk-taking behaviors), and the second was used to examine the sexual functioning variables (dyadic sexual desire, solitary sexual desire, number of sexual dysfunctions). If the multivariate test was significant, the univariate analyses of variance (ANOVA) were then examined, and if these were significant, Bonferroni post hoc tests were then used to further examine the pairwise comparisons. Given the effect of victimization status on overall sexual risk-taking behaviors, a follow-up multivariate analysis of covariance (MANCOVA) was also run to explore the effect of sexual victimization on the five SRS subscale scores. Past sexual experience (whether the person has engaged in consensual oral, anal, or vaginal sex; 0 = no, 1 = yes) was included as a covariate in this analysis given that some of the SRS items require past sexual experience with a partner to score above a 0. Effect sizes are presented in the form of partial eta squared and can be generally interpreted as follows: .01, a small effect size, .06, a medium effect size; and .14,

a large effect size (Cohen, 1977). Box's M tests, examination of bivariate scatterplots, and screening for outliers was conducted before each analysis and revealed no violations of MANOVA or MANCOVA assumptions.

Results

Frequency of Victimization and Bivariate Correlations

In this study, 51.2% ($N = 153$) of male participants reported at least one experience of sexual victimization since age 16 with 5.6% reporting victimization experiences by male perpetrators, 48.4% by female perpetrators, and 3% by both sexes. When participants were placed in mutually exclusive groups based on the most severe type of victimization reported, 48.8% ($N = 146$) reported none, 21.7% ($N = 65$) reported unwanted sexual contact, 12.4% ($N = 37$) reported sexual coercion, and 17.1% ($N = 51$) reported completed rape (see Table 1).

Bivariate correlations revealed that all of the variables except solitary sexual desire and one of the five subscales of the SRS, Risky Anal Sex Acts, were correlated with sexual victimization status (see Table 2).

Table 2

Bivariate Correlations Among Health Risk Behaviors, Sexual Functioning Variables, and Sexual Victimization Severity

Variable/Subscale	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Sexual victimization severity	—	.19**	.24**	.17**	.12**	.31**	.10*	-.04	.30**	.29**	.13**	.32**	.10*	.07
2. Weekly drinking		—	.57**	.37**	.29**	.48**	.19**	.15**	.01	.38**	.28**	.41**	.38**	.12**
3. Problematic drinking			—	.33**	.22**	.41**	.17**	.11**	.14**	.31**	.21**	.38**	.35**	.09*
4. Drug use				—	.53**	.24**	.19**	.12**	.06	.21**	.16**	.20**	.14**	.04
5. Tobacco use					—	.19**	.15**	.19**	.05	.20**	.04	.16**	.21**	-.02
6. Sexual risk taking						—	.29**	.19**	.20**	.86**	.65**	.74**	.56**	.40**
7. Dyadic sexual desire							—	.36**	.10*	.20**	.24**	.15**	.25**	.14**
8. Solitary sexual desire								—	-.03	.10*	.07	.15**	.27**	.11**
9. Sexual dysfunctions									—	.18**	.16**	.14**	.02	.14**
10. Risk with uncommitted partners										—	.41**	.59**	.37**	.23**
11. Risky sex acts											—	.19**	.13**	.35**
12. Impulsive sexual behaviors												—	.45**	.09*
13. Intent to engage in sexual risk													—	.06
14. Risky anal sex														—

* $p \leq .05$. ** $p \leq .01$.

Sexual Victimization and Health Risk Behaviors

A one-way MANOVA was conducted to examine the effect of sexual victimization on health risk behavior engagement. The multivariate test was significant, Wilks's $\lambda = .83$, $F(15, 804) = 3.84$, $p < .001$, $\eta_p^2 = .06$, observed power = 1.00, indicating significant differences among the victimization categories on the combined health risk variables. The univariate ANOVA tests were then performed, and victimization category differences were significant for weekly drinking, problematic drinking behaviors, tobacco use, and sexual risk taking when the alpha was set at .01 using a Bonferroni correction. The effect sizes ranged from small to medium. The Bonferroni post hoc analyses revealed a number of differences between the victimization groups (see Table 3).

Given the significance of sexual risk taking, using the full SRS score, a one-way MANCOVA was conducted to examine the effect of sexual victimization status on the five SRS subscales scores. Sexual experience was included as a dichotomous covariate. MANCOVA results indicated significant differences among the victimization categories on the combined sexual risk subscales, Wilks's $\lambda = .85$, $F(15, 800) = 3.16$, $p < .001$, $\eta_p^2 = .05$,

observed power = .99. The covariate, sexual experience, significantly influenced the combined dependent variable, Wilks's $\lambda = .76$, $F(5, 290) = 18.70$, $p < .001$, $\eta_p^2 = .24$, observed power = 1.00. Analyses of covariance (ANCOVAs) were conducted on the dependent variables as follow-up tests to the MANCOVA, demonstrating that victimization status differences were significant for three of the five subscales—Sexual Risk Taking With Uncommitted Partners, Impulsive Sexual Behaviors, and Intent to Engage in Risky Sexual Behaviors—while controlling for sexual experience and using a more conservative alpha level of .01. Effect sizes ranged from small to medium. Bonferroni post hoc tests revealed a number of significant differences (see Table 4).

Sexual Victimization and Sexual Functioning

A one-way MANOVA was conducted to determine the effect of sexual victimization status on sexual functioning. The multivariate test was significant, Wilks's $\lambda = .83$, $F(9, 708) = 1.91$, $p < .05$, $\eta_p^2 = .02$, observed power = .84, indicating significant differences among the victimization categories on the sexual functioning variables. The univariate tests were then performed, using a more conservative alpha

Table 3
Multivariate Analyses of Variance Examining Effects of Sexual Victimization Status on Health Risk Behaviors and Sexual Functioning

Variables	Sample M (SD)	Nonvictim	Unwanted sexual contact	Sexual coercion	Rape	Wilk's Λ	Univariate F	Partial η^2
Weekly drinking	26.24 (13.83)	22.08 (13.04) _{a,b,c}	27.60 (12.36) _a	29.73 (12.03) _b	33.86 (15.03) _c	.826***	11.70***	.11
Problematic drinking	3.38 (2.11)	2.73 (1.96) _{a,b,c}	3.75 (2.04) _a	4.08 (1.93) _b	4.25 (2.17) _c		10.50***	.10
Drug use	7.11 (3.89)	6.52 (3.90)	7.62 (3.59)	7.24 (4.02)	8.04 (3.93)		2.51	.03
Tobacco use	1.10 (1.12)	.92 (1.08) _a	1.20 (1.18)	1.14 (1.08)	1.47 (1.14) _a		3.40***	.04
Sexual risk taking	19.86 (14.52)	16.27 (13.88) _a	19.63 (13.13) _b	21.54 (13.32)	29.18 (14.84) _{a,b}		11.18***	.10
Dyadic sexual desire	36.63 (10.95)	36.90 (11.56)	37.67 (10.14)	36.38 (10.26)	37.04 (10.83)	.943*	0.34	.00
Solitary sexual desire	8.02 (5.16)	7.55 (5.08)	9.20 (5.22)	7.86 (5.08)	7.98 (5.31)		1.54	.02
Sexual dysfunctions	0.51 (0.79)	0.41 (0.75) _a	0.52 (0.69)	0.43 (0.56)	0.84 (1.03) _a		4.15***	.04

Note. Means (SD) in the same row with the same superscripts differ at $p < .05$ based on Bonferroni post hoc comparisons.
* $p < .05$. ** $p < .01$. *** $p < .001$.

Table 4
Multivariate Analysis of Covariance Examining Effects of Sexual Victimization Status on Sexual Risk Survey Subscales

Variables	Sample M (SE)	Nonvictim	Unwanted sexual contact	Sexual coercion	Rape	Wilk's Λ	Univariate F	Partial η^2
Risk with uncommitted partners	5.64 (0.37)	4.49 (0.47) _a	4.63 (0.70) _b	5.52 (0.93)	7.93 (0.79) _{a,b}	.826***	4.87**	.05
Risky sex acts	5.19 (0.28)	5.75 (0.36)	4.52 (0.52)	4.67 (0.70)	5.82 (0.60)		1.78	.02
Impulsive sexual behaviors	6.03 (0.27)	4.42 (0.35) _a	5.69 (0.51) _b	5.45 (0.68) _c	8.58 (0.58) _{a,b,c}		12.22***	.11
Intent to engage in sexual risk	3.20 (0.20)	2.48 (0.25) _a	3.34 (0.37)	3.33 (0.49)	3.69 (0.42) _a		2.64**	.03
Risky anal sex	0.72 (0.13)	0.97 (0.16)	0.50 (0.24)	0.47 (0.32)	0.97 (0.27)		1.39	.01

Note. All means and standard errors are adjusted for the covariate of sexual experience. Means (SEs) in the same row with the same subscripts differ at $p < .05$ based on Bonferroni post hoc comparisons.
** $p < .01$. *** $p < .001$.

level of .01, and victimization category differences were significant only for number of sexual dysfunctions (see Table 3), accounting for a modest amount of the variance. The Bonferroni post hoc analyses revealed that those men who experienced rape reported a greater number of sexual dysfunctions compared with those who reported no victimization.

Overall, results from this study demonstrate that (a) over half of the college men reported some form of sexual victimization; (b) men with sexual victimization experiences reported higher levels of weekly drinking, problematic drinking, tobacco use, sexual risk-taking behavior, and sexual dysfunction; and (c) those men with more severe sexual victimization experiences generally reported engaging in more health risk behaviors and experiencing more sexual dysfunctions than those who reported less severe experiences.

Discussion

The primary goal of this study was to examine the relationship between sexual victimization among college men and engagement in a number of health risk behaviors and sexual functioning. These relationships have largely not been addressed among college men, and research on male sexual victimization in general has been understudied (Chapleau et al., 2008; Davies, 2002; Ratner et al., 2003). These results demonstrated, as hypothesized, that sexual victimization among college men is related to higher levels of alcohol use, problem drinking behaviors, tobacco use, sexual risk behaviors, and more sexual functioning problems; however, neither drug use nor sexual desire were related in the presence of the other predictors. This study also demonstrated that health risk behaviors and sexual functioning problems were greatest among those who experienced more severe victimization with all of these problematic behaviors being greater among those who reported rape compared to no victimization. These findings underscore the importance of using a multiitem behaviorally specific measure versus a one or two item measure that does not allow one to differentiate assault types.

The findings that health risk behaviors are related to sexual victimization are consistent with prior findings demonstrating that college men who report victimization have higher rates

of alcohol consumption and alcohol-related consequences (Larimer et al., 1999; Palmer et al., 2010), as well as research with college women (e.g., Brener et al., 1999; Gidycz et al., 2008) and male adolescents (Shrier et al., 1998). Given the cross-sectional design of this study, the directionality of the relationship between the health risk behaviors and sexual victimization cannot be determined. As noted, three possible mechanisms for these associations have been posited: (a) men who engage in health risk behaviors are more at risk to be victimized; (b) men who are victimized are subsequently more likely to engage in health risk behaviors; or (c) there is a reciprocal relationship between these variables and victimization (see Champion et al., 2004, and Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997, for discussion of these relationships). One possible explanation for these results may be that men who experience victimization are more likely to experience mental health problems and then subsequently engage in risky behavior such as substance abuse to cope or self-medicate rather than seeking treatment. Additionally, it is important to note that variables such as a man's adherence to traditional beliefs about masculinity, endorsement in male rape beliefs, and sexual orientation may play a role in determining the extent of these relationships. Aosved et al. (in press) suggested, for instance, that male victims with stronger adherence to traditional masculine ideals may experience greater denial and shame and be less likely to seek social support or help. These men may then in turn be more likely to engage in unhealthy risk behaviors to cope rather than talking to family or friends or seeking treatment. Although no longitudinal studies have been able to tease apart these possible explanations among male victims, these data clearly indicate that men who are sexually victimized are engaging in a greater number of problematic risk behaviors, which is particularly concerning given college men, regardless of victimization status, are at high risk to engage in these behaviors (e.g., Johnston et al., 2007; Turchik & Garske, 2009).

Further examination of the association between sexual risk taking and sexual victimization status was possible by examining the five subscales of the Sexual Risk Survey. It is noteworthy that the three subscales that were significant—Sexual Risk Taking With Uncommitted

Partners, Impulsive Sexual Behaviors, and Intent to Engage in Risky Sexual Behaviors—are the three that include the items related to seeking out and engaging in impulsive and casual sexual experiences. Such experiences may put a person at more risk to experience sexual victimization by being alone with a greater number of potential assailants and engagement in other risk behaviors, such as substance abuse, which may impair one's judgment or ability to resist an assault. Although, given that the directionality is unclear, it could also be that men who are victimized are subsequently more likely to engage in sexual risk behaviors because of mediating psychological issues or because they feel a need to "prove" their masculinity or heterosexuality.

The hypotheses related to sexual functioning were partially supported by the data. Although both decreased dyadic sexual desire and number of sexual functioning difficulties were related to sexual victimization, only sexual functioning difficulties were related in the presence of the other predictors. The finding that solitary sexual desire ratings did not differ by victimization status is not that surprising, but it is noteworthy that dyadic desire was not affected. The increased number of sexual functioning difficulties reported by men who were victimized is consistent with findings among community men (Elliott et al., 2004), and demonstrate the need for more research on this understudied topic.

Whereas the findings from this research provide important information on college male sexual victimization, there are some limitations to this study. First, the homogeneous nature of the sample makes it difficult to generalize these findings to college men in more culturally diverse settings or to noncollege men. Second, as discussed previously, given the cross-sectional design of this study, it is not possible to determine causality and it is recommended that future research use prospective designs to further explore these relationships. Another limitation is that although it is noted that mental health problems as well as men's beliefs about masculinity, sexual identity, and sexual orientation may be important in providing further examination of these relationships, these variables were not included in this study. Last, this study did not rely on legal definitions to define the categories of sexual victimization. However, given that the legal institution has not historically

recognized male sexual victimization and definitions and laws are not consistent across U.S. states or countries (see Turchik & Edwards, *in press*, for a discussion), sexual victimization was measured in a behaviorally specific gender-neutral manner consistent with the measurement of female sexual victimization.

Despite the above limitations, this investigation provides some initial information about variables that are related to male sexual victimization among college students. These findings suggest that male sexual victimization is related to a number of negative behaviors and problems and is an issue that needs to be addressed on college campuses. Awareness and education on male sexual victimization is needed to prevent victimization and support victims, especially given that college men are less likely to disclose unwanted sexual experiences, less knowledgeable about rape crisis resources, indicate less willingness to use sexual assault support services if they needed them, and are less likely to report attending a rape prevention program than college women (Banyard et al., 2007). Unfortunately, almost all sexual assault risk reduction and prevention programming focus on women as potential victims and men as potential perpetrators; however, a more recent type of programming has focused on men and women as bystanders of sexual assault who have the power to intervene and prevent sexual assault (e.g., Banyard, Plante, & Moynihan, 2004). This type of approach has the potential to include male victimization issues and lead to changes in peer norms related to male and female rape, and ultimately, decreases in victimization rates. Further, given the relationships between substance use, sexual risk taking, and sexual victimization in both college men and women, prevention and intervention programs that combine information on health risk behaviors and sexual victimization may be appropriate for college students of both sexes.

In addition to implications for further research and college campus awareness and prevention programming, the results of this study also have implications for clinical treatment. Given that college men report being less likely to disclose or seek help if they were sexually assaulted (Banyard et al., 2007), outreach by mental health professionals and sexual assault organization is needed to make men aware of the availability of these services and to encour-

age treatment seeking. Further, it is likely that many men who do seek treatment for symptoms or problems related to sexual assault may not report the sexual victimization but instead present only with secondary issues such as substance abuse or mood symptoms. This highlights the importance for universal sexual violence screening for both men and women patients (Probst, Turchik, Zimak, & Huckins, 2011), and clinicians should be familiar with behavioral indicators of sexual assault among men (see Yeager & Fogel, 2006). Given that men may feel uncomfortable discussing victimization experiences, clinicians may want to tailor therapy to the unique needs of men (e.g., Englar-Carlson & Stevens, 2006; Rabinowitz & Cochran, 2002). In particular, issues around sexual functioning, sexual identity, sexual orientation, and male rape myths may be important in the context of treatment, as counselors and other health care professionals need to be aware of and educated about these issues as they may be particularly prevalent among male victims.

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