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# Risk Factors for Forced, Incapacitated, and Coercive Sexual Victimization Among Sexual Minority and Heterosexual Male and Female College Students

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## Abstract

Although college students are at high risk for sexual victimization, the majority of research has focused on heterosexual students and often does not differentiate by victimization type. Thus, little is known about prevalence rates and risk factors for sexual victimization among sexual minority college students and whether the interaction between gender and sexual orientation differs by victimization type. To address these gaps, we examine whether risk factors for three types of sexual victimization (i.e., forced, incapacitated, and coerced) differ by gender ( $n = 681$  males;  $n = 732$  females) and sexual orientation ( $n = 1,294$  heterosexual;  $n = 119$  sexual minority) and whether the intersection of gender and sexual orientation is correlated with these three types of sexual victimization among 1,413 college students. Prevalence rate results revealed significant differences between gender and sexual orientation: Sexual minority females had the highest rates of coerced sexual victimization (58%), and their mean was significantly different from the other three groups (i.e., heterosexual females, heterosexual males, and sexual minority males). For both forced and incapacitated sexual victimization, heterosexual males had significantly lower means than the other three groups. Logistic regression results revealed

that child sexual abuse increased the odds of experiencing both forced and coerced sexual victimization for both heterosexual and sexual minority students, whereas increased rates of risky sexual behavior were associated with forced and incapacitated sexual victimization but only for heterosexuals. Finally, heavy drinking increased the odds of experiencing incapacitated sexual victimization for both heterosexuals and sexual minorities.

**Keywords:** types of sexual victimization, sexual minority, gender, college students

## Introduction

Sexual assault on college campuses occurs at alarmingly high rates. It is estimated that approximately 20% of women will report at least one sexual assault experience while in college (Krebs et al., 2016). Sexual victimization (used interchangeably in this article with sexual assault) may include acts that are facilitated with alcohol and drugs, or are committed through force, verbal pressure, or coercion (Basile, Smith, Breiding, Black, & Mahendra, 2014). Although most of the research has emphasized the dichotomy of men as perpetrators (Abbey & McAuslan, 2004; Wells et al., 2014) and women as victims (Fisher, Cullen, & Turner, 2000), approximately 14% of college men have experienced sexual assault as an adult (Aosved, Long, & Voller, 2011). Moreover, rape definitions have only recently been updated to include men as victims (U.S. Department of Justice, Federal Bureau of Investigation, 2014). Subsequently, there has been less research conducted on male victims of sexual assault compared with female victims. A second gap in the literature is that research on sexual victimization has typically focused on heterosexual college students. One study that examined sexual minority college students found that this group was more than 2 times as likely to have experienced sexual victimization compared with heterosexual college students (Edwards et al., 2015). A third literature gap is that in most research, sexual minority individuals are grouped into a single category due to their small numbers, which results in a lack of nuance between sexual minority men versus women (Mize, 2015). A fourth literature gap is a lack of research examining the intersection between gender and sexual orientation with sexual victimization. This is particularly salient given that a recent study found that past-year prevalence rates for sexual assault were higher for sexual minority men compared with heterosexual men (Coulter et al., 2017). Furthermore, learning whether risk factors for sexual victimization vary for different social groups is also important given that the combination of gender and sexual orientation has been shown to produce stressors unique to these populations (Meyer, 2015). One final literature gap stems from the general tendency to study sexual victimization through a single combined measure (Aosved et al., 2011; Edwards et al., 2015; Hines, Armstrong, Reed, & Cameron, 2012).

As a result, the relationship between gender, sexuality, and risk factors with different types of sexual victimization is largely unknown. To address these literature gaps, we examine whether risk factors and prevalence rates for three types of sexual victimization (i.e., forced, incapacitated, and coerced) differ by gender and sexual orientation, and whether the intersection of gender and sexual orientation is correlated with the risk for different types of sexual victimization among college students.

### ***Prevalence Rates for Sexual Victimization***

Prevalence rates for different sexual assault types vary among male and female college students. For example, some research has found that approximately 25% of women have been victims of a completed or attempted rape in college (Fisher et al., 2000), whereas the corresponding rate among male college students is only 1% to 3% (Hines, 2007). Although some studies have found the rates among women to be much lower (Hines et al., 2012; for example, 5%), this difference is due in part to the type of sexual victimization measured (e.g., “forced” vs. “any”) as well as the reference period used (e.g., past 2 months vs. past 12 months). Prevalence rates for types of sexual victimization other than rape, however, are more similar: 55% of college women experienced unwanted sexual activity (e.g., being fondled or touched sexually) compared with 39% of college men (Tyler, Schmitz, & Adams, 2017). Another recent study of college students found that gay and bisexual men had a sexual assault prevalence rate 3 times higher than heterosexual men (Coulter et al., 2017). In addition, the sexual assault prevalence rate among bisexual women was 2 times higher compared with heterosexual women, whereas the sexual assault prevalence rate among lesbian women was only slightly higher than heterosexual women (Coulter et al., 2017).

### ***Correlates of Sexual Victimization***

Child sexual abuse has been found to be associated with higher rates of sexual victimization later in life (Aosved et al., 2011; Hines et al., 2012; Messman-Moore, Walsh, & DiLillo, 2010). Revictimization has been predominantly studied in females, as previous research has found higher rates of child sexual abuse in women (Snyder, 2000). This risk of victimization has been shown to be significantly higher for individuals who were victims of past abuse either as a child, adolescent, or an adult (Classen, Palesh, & Agarwal, 2005). Findings for males also show a positive association between child sexual abuse and adult sexual victimization (Aosved et al., 2011; Tyler et al., 2017).

Consuming large quantities of alcohol on either the victim or perpetrator's part has also been found to be a strong correlate of sexual assault

among females (Abbey, Ross, McDuffie, & McAuslan, 1996). Drinking on the part of the victim may make them more vulnerable to experiences of sexual assault (Palmer, McMahon, Rounsaville, & Ball, 2010) because a potential offender may be more likely to take advantage of women who are inebriated (Testa, VanZile-Tamsen, & Livingston, 2004). Although large numbers of both college men and women report having gotten drunk in the past 30 days (44% vs. 34%, respectively) and 32% of college students report binge drinking (Johnston, O'Malley, Bachman, Schulenberg, & Miech, 2016), male college students are over 3 times more likely than female college students to consume 10 or more drinks in a row (22% vs. 7%; Johnston et al., 2016). Because males get drunk and binge drink at higher rates than females (Johnston et al., 2016), men who consume large quantities of alcohol may also be at risk for sexual victimization. Specifically, drunken college men are more likely to come into contact with potential offenders (i.e., those who may take advantage of them); thus, the role of alcohol may be equally important in explaining men's risk for sexual victimization.

Engaging in risky sexual behavior (e.g., sex with multiple partners) has also been linked to sexual assault (Gidycz, Orchowski, King, & Rich, 2008; Turchik, 2012; Turchik & Hassija, 2014). Hooking up (i.e., spontaneous sexual encounters without the expectation of further involvement), for example, has been found to be associated with more frequent heavy drinking among college students (Fielder & Carey, 2010; Tyler et al., 2017). Turchik and Hassija (2014) found that heavy drinking and drug use and risky sexual behavior were positively associated with sexual victimization among female college students. Among male college students, sexual risk-taking behaviors and problematic drinking were linked to sexual victimization (Turchik, 2012).

### ***Theoretical Framework***

Different theories and models have been used to understand sexual assault (e.g., Abbey et al., 1996; Franklin, Bouffard, & Pratt, 2012). These theories have included, for example, peer support theories (DeKeseredy & Kelly, 1995), social learning theories (Simons, Burt, & Simons, 2008), crime theories (Finkelhor & Asdigian, 1996), and attachment theories (Sutton & Simons, 2015). For this study, we use lifestyle-exposure theory (Hindelang, Gottfredson, & Garofalo, 1978) and routine activity theory (Cohen & Felson, 1979) to understand the association between risky behaviors and sexual victimization. Specifically, both theories examine how the lifestyles and activities of individuals in their everyday lives are related to differential exposure to dangerous places and people, which creates the potential for increased victimization. However, differential risks for victimization are likely among

different social groups (Miethe & Meier, 1994), such as males and females and heterosexuals and sexual minorities.

The lifestyle of college students often entails exposure to campus environments where students overestimate peers' alcohol and drug use (Lewis & Neighbors, 2004) and where expectations for drinking are high (LaBrie, Hummer, Ghaidarov, Lac, & Kenney, 2014), which increases one's own risk for alcohol and drug use (Martens et al., 2006). Because these social environmental factors are positively linked with sexual assault (Abbey, 2002; Sutton & Simons, 2015; Walsh, Latzman, & Latzman, 2014), heavy drinking within the college environment increases the likelihood that some students will come into contact with potential offenders (i.e., those who will take advantage of them sexually). That is, almost 50% of all sexual assaults involve alcohol use by the perpetrator, victim, or both (Abbey, 2002). Moreover, certain individuals may be targeted by a potential offender. For example, "femaleness" may be an attribute of the victim that is congruent with the needs and motives of a sexual offender (Finkelhor & Asdigian, 1996); therefore, females may be targeted more often. Although experiences of heteronormativity, or the privileging of heterosexuality (Wickens & Sandlin, 2010), may be less severe on college campuses (Singh, Meng, & Hansen, 2013) compared with the community, the risk for sexual minority college students to experience prejudiced attitudes still exists (Wickens & Sandlin, 2010) and puts them at higher risk for negative outcomes (Meyer, 2015). Thus, "sexual minority" may be an attribute that is congruent with the needs of some sexual offenders.

**Hypotheses.** Based on prior literature and the above theories, we hypothesized that (1) college students with a history of child sexual abuse are at greater risk for sexual victimization, (2) college students who engage in heavy drinking are at greater risk for sexual victimization, (3) college students who engage in more risky sexual behavior are at greater risk for sexual victimization, (4) heterosexual females are at greater risk for sexual victimization compared with heterosexual males, (5) sexual minority college students are at greater risk for sexual victimization compared with heterosexual students, (6) sexual minority male college students are at greater risk for sexual victimization compared with heterosexual male college students, and (7) sexual minority female college students are at greater risk for sexual victimization compared with heterosexual female college students. Because there is limited research that has compared the different types of sexual victimization among sexual minority students, we do not hypothesize by specific victimization type (i.e., forced, coerced, or incapacitated).

## **Method**

### ***Study Site and Sample Size***

Data were gathered in the 2013-2014 academic year at two large public universities in the United States, one in the Midwest ( $n = 704$ ) and one in the Southeast ( $n = 778$ ). Both universities are public land-grant institutions with undergraduate enrollment ranging from 20,000 to 25,000 students. Racial composition at both locations during data collection was approximately 80% White. The combined sample, after listwise deletion for all study variables, consisted of 1,413 undergraduate college students (664 for the Midwest campus; 749 for the Southeast campus).

### ***Procedure***

Undergraduate students enrolled in social science courses were administered a paper and pencil survey of attitudes and experiences about dating, sexuality, substance use and outcomes, and sexual victimization. Every student was eligible to participate. Students were informed that their participation was voluntary and their responses were anonymous.<sup>1</sup> Approximately 98% of all students in attendance across both institutions completed the survey, while the remaining students opted for the alternative assignment. The institutional review board at both institutions approved this study for their respective location.

### ***Measures***

*Sexual victimization* included a modified version of the Revised Sexual Experiences Survey (Testa, VanZile-Tamsen, Livingston, & Koss, 2004). Both women and men were asked the following 12 questions: How often has anyone (a) "overwhelmed you with arguments about sex or continual pressure for sex in order to ...," (b) "threatened to physically harm you or used physical force (such as holding you down) in order to ...," and (c) "When you were incapacitated (e.g., by drugs or alcohol) and unable to object or consent how often has anyone ever ..." within the past 12 months? Within each of these three sections, the following four questions were asked: (a) fondle, kiss, or touch you sexually; (b) try to have sexual intercourse with you (but it did not happen); (c) succeed in making you have sexual intercourse; and (d) make you have oral or anal sex or penetrate you with a finger or objects "when you indicated you didn't want to?" Response categories ranged from 0 = never to 4 = more than 4 times. The language was gender neutral and thus applicable to both males and females. Due to skewness, the individual items were dichotomized. Thus, each of the three types of sexual

victimization (i.e., forced, incapacitated, and coerced) was a single dichotomous variable where 0 = never happened and 1 = that form of sexual victimization (e.g., forced) occurred at least once.

*Child sexual abuse* was measured by asking respondents, "Before you were age 18, did any adult or someone at least 5 years older than you ever touch you sexually or have you touch them sexually?" (0 = no; 1 = yes).

*Heavy drinking* included two items (adapted from Testa, Livingston, & Leonard, 2003) which asked respondents, "During the past 12 months, how many times have you gotten drunk on alcohol" and "During the past 12 months, how many times have you consumed five or more (if you're a man)/ four or more (if you're a woman) drinks in a single sitting" (0 = never to 5 = 5 or more days per week). The two items were averaged (Testa et al., 2003), so a higher score indicated more frequent heavy episodic drinking. The correlation between the two items was .85.

*Risky sexual behavior* included three items, previously used with college students (Simons, Burt, & Tambling, 2013). First, age at first intercourse (1 = less than 14 years of age to 5 = never experienced sexual intercourse) was recoded so that a higher score indicated earlier sexual debut. Second, the number of people they have had sexual intercourse with either vaginally or anally (1 = none to 5 = 10 or more). Third, how often they used condoms during sex (1 = always to 3 = never; those who have never had sexual intercourse were recoded from 4 to 1). These three items were standardized and then a mean score was created, where higher scores indicated higher levels of risky sexual behavior.

*Sexual orientation* was measured using the question, "When you have romantic or sexual feelings toward another person, the person is ..." with the following response options: "Always male," "Usually male but sometimes I am attracted to females," "Equally likely to be male or female," "Usually female but sometimes I am attracted to males," and "Always female." This question was combined with the question "What is your sex?" (0 = male; 1 = female). Males who responded that they are at least sometimes attracted to other males were coded as sexual minority, and females who are at least sometimes attracted to other females were coded as sexual minority. These attitudinal measures of sexual orientation have been used in prior research (Edwards et al., 2015).

### **Data Analyses**

All analyses were completed in Stata 13.1. To test differences in mean values for the four different groups (i.e., male, female, heterosexual, and sexual minority), we used student *t* tests. These *t* tests compare the means of different groups on quantitative variables by using the standard errors of each group to determine the significance of the difference between means relative to the sampling error present (Warner, 2013). We used the Bonferroni



correction method to account for the additional significance tests required due to the four different groups (Warner, 2013). Significance values of less than .05 were reported as significant. Given the dichotomous nature of the three sexual victimization types, binary logistic regressions were performed on different subsamples. First, the sample was portioned by gender (males and females) and identical regressions were performed that included sexual orientation as a correlate. Next, the sample was split by sexual orientation (heterosexual and sexual minority) and logistic regressions were performed that included gender as a correlate. Sixty-nine cases (4.7%) were dropped due to missing data on the study variables. The sample size for our final analyses included 1,413 cases.

## Results

### *Sample Characteristics*

Approximately one half of the sample was female ( $n = 732$ ; 51.8%). The majority of respondents were White (80.6%), followed by Black/African American (6.8%), Asian (6.8%), Hispanic or Latino (3.5%), and 2.3% identified their race as "other." In terms of sexual orientation, 8.4% ( $n = 119$ ) of the sample responded that at least sometimes they were sexually or romantically attracted to someone of the same sex. The combination of gender and sexual orientation revealed 663 heterosexual women, 69 sexual minority women, 631 heterosexual men, and 50 sexual minority men. Forty-three percent of the sample had experienced at least one form of sexual victimization at least one time in the previous 12 months (see Table 1 for descriptive information on all study variables).

**Table 1.** Descriptive Statistics of Study Variables.

<i>Variable Name</i>	<i>M/P</i>	<i>SD</i>
Heterosexual female	0.47	
Sexual minority female	0.05	
Heterosexual male	0.45	
Sexual minority male	0.03	
Forced SV	0.06	
Incapacitated SV	0.26	
Coerced SV	0.35	
CSA	0.09	
Heavy drinking	1.25	1.01
Risky sexual behavior (std.)	-0.01	0.81

P = proportion; SV = sexual victimization; CSA = child sexual abuse; std. = standardized; M = mean; SD = standard deviation.

**Table 2.** Student's t Test Comparisons by Gender and Sexuality.

<i>Variable Name</i>	<i>Heterosexual Females</i>	<i>Sexual Minority Females</i>	<i>Heterosexual Males</i>	<i>Sexual Minority Males</i>
Forced SV	0.065	0.116 <sup>HM</sup>	0.038 <sup>SMF</sup>	0.120
Incapacitated SV	0.327 <sup>HM</sup>	0.362 <sup>HM</sup>	0.176 <sup>HF,SMF</sup>	0.340
Coerced SV	0.416 <sup>SMF,HM</sup>	0.580 <sup>HF,HM</sup>	0.242 <sup>HF,SMF,SMM</sup>	0.440 <sup>HM</sup>
CSA	0.095 <sup>SMM</sup>	0.159	0.068 <sup>SMM</sup>	0.220 <sup>HF,HM</sup>
Heavy drinking	0.998 <sup>HM</sup>	0.906 <sup>HM</sup>	1.541 <sup>HF,SMF</sup>	1.300
Risky sexual behavior	-0.089 <sup>SMF,HM</sup>	0.193 <sup>HF</sup>	0.051 <sup>HF</sup>	0.044
<i>n</i>	663	69	631	50

SV = sexual victimization; CSA = child sexual abuse.

HF: Mean is significantly different from the mean for heterosexual females ( $p < .05$ ).

SMF: Mean is significantly different from the mean for sexual minority females ( $p < .05$ ).

HM: Mean is significantly different from the mean for heterosexual males ( $p < .05$ ).

SMM: Mean is significantly different from the mean for sexual minority males ( $p < .05$ ).

### ***Bivariate Results***

***Forced sexual victimization.*** Table 2 shows the mean values of forced, incapacitated, and coerced sexual victimization by gender (male and female) and sexuality categories (heterosexual and sexual minority). Each mean value was compared across each of the four categories to test whether they were significantly different. Row 1 of Table 2 shows that almost 7% of heterosexual females and approximately 12% of both sexual minority females and sexual minority males had experienced some form of sexual victimization due to force in the past year, though the values for these three groups were not significantly different from one another. In addition, almost 4% of heterosexual males had this experience in the past year, and this value is significantly different from sexual minority females.

***Incapacitated sexual victimization.*** Row 2 of Table 2 shows that heterosexual males had the lowest rate of incapacitated sexual victimization, at 18%, and this group was significantly different from both heterosexual and sexual minority females. Variation in rates for the other three groups ranged from 33% to 36%, but there were no significant differences in the means. This indicates that only heterosexual males have lower rates of sexual victimization related to incapacitation, and this rate is significantly different from two of the other groups.

***Coerced sexual victimization.*** Table 2 (row 3) shows that the rate of coerced sexual victimization for heterosexual females was approximately 42%,

and this value was significantly different for both sexual minority females (58%) and heterosexual males (24%). Heterosexual males reported the lowest rate, and they were significantly different from all three of the other groups. Forty-four percent of sexual minority males reported sexual victimization related to coercion, and they were significantly different from heterosexual males. Finally, sexual minority females had the highest reported rates of sexual victimization related to coercion, at 58%, and were significantly different from both heterosexual females and heterosexual males.

**Child sexual abuse.** In Table 2, results show that heterosexual men had the lowest rate of child sexual abuse, at 7%, but they were not significantly different from heterosexual females at approximately 10% or sexual minority females at 16%. Finally, sexual minority males reported the highest rate of child sexual abuse (22%), and this was significantly different from both heterosexual males and heterosexual females.

**Heavy drinking and risky sexual behavior.** Table 2 also shows that females (heterosexual = 0.998 and sexual minority = 0.906) drank significantly less than heterosexual males (1.541), while sexual minority males fall in the middle (1.300) and they were not significantly different from any of the other groups. Heterosexual females have lower rates of risky sexual behavior compared with all three of the other groups, with a mean value (z score) of  $-0.089$ , and this difference was significant compared with both sexual minority females and heterosexual males. While the means for the other three groups ranged from 0.044 (sexual minority males) to 0.193 (sexual minority females), they were not significantly different from one another.

### **Multivariate Results**

Table 3 shows three binary logistic regression models for the three types of sexual victimization—forced, incapacitated, and coerced—by gender.<sup>2</sup> In Model 1, a history of child sexual abuse increased the odds of being a victim of forced sexual victimization by a factor of 4.34 ( $p < .01$ ) for males and 4.81 ( $p < .001$ ) for females. Risky sexual behavior was also a significant correlate of forced sexual victimization but only for males, where a one-unit increase in risky sexual behavior was associated with an increase in the odds of being a victim of forced sexual victimization by a factor of 2.59 ( $p < .01$ ).

In Model 2 (Table 3), heavy drinking was associated with an increase in the odds of being a victim of incapacitated sexual victimization by a factor of 1.69 ( $p < .01$ ) for males and 2.20 ( $p < .001$ ) for females. Risky sexual behavior was associated with an increase in the odds of being a victim of incapacitated sexual victimization for both males and females by factors of 1.60 ( $p < .01$ ) and 1.35 ( $p < .01$ ), respectively. Finally, being heterosexual reduced

**Table 3.** Logistic Regression Models for Types of Sexual Victimization by Gender.

	<i>Forced SV (OR)</i>		<i>Incapacitated SV (OR)</i>		<i>Coerced SV (OR)</i>	
	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>	
	<i>Male</i>	<i>Female</i>	<i>Male<sup>a</sup></i>	<i>Female<sup>a</sup></i>	<i>Male<sup>a</sup></i>	<i>Female</i>
CSA	4.34**	4.81***	0.77	1.51	3.23***	2.37**
Heavy drinking	0.88	1.08	1.69**	2.20***	1.29**	1.32**
Risky sexual behavior	2.59**	1.18	1.60**	1.35**	1.94***	1.53***
Heterosexual	0.47	0.64	0.38**	0.88	0.48*	0.58*
McFadden pseudo $R^2$	.13	.07	.09	.11	.10	.06

SV = sexual victimization; OR = odds ratio; CSA = child sexual abuse.

a. Indicates higher risk for that group at Midwest campus compared with Southeast campus.

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

the risk of being a victim of incapacitated sexual victimization by 62% (odds ratio [OR] = 0.38;  $p < .01$ ) for males.

In Model 3 (Table 3), a history of child sexual abuse increased the odds of being a victim of coerced sexual victimization by a factor of 3.23 ( $p < .001$ ) for males and 2.37 ( $p < .01$ ) for females. A one-unit increase in heavy drinking was associated with a 29% increase in the odds for males (OR = 1.29;  $p < .01$ ) and a 32% increase in the odds for females (OR = 1.32;  $p < .01$ ) of having experienced coerced sexual victimization. Higher rates of risky sexual behavior were associated with increased odds of having experienced coerced sexual victimization by a factor of 1.94 ( $p < .001$ ) for males and 1.53 ( $p < .001$ ) for females. Being heterosexual decreased the odds of having experienced coerced sexual victimization for both males (OR = 0.48;  $p < .05$ ) and females (OR = 0.58;  $p < .05$ ).

Table 4 shows three binary logistic regression models for the three types of sexual victimization by sexual orientation (i.e., heterosexual and sexual minority). These three models controlled for campus location. Model 1 showed that child sexual abuse increased the odds of having experienced forced sexual victimization for both heterosexuals and sexual minorities, by a factor of 4.51 ( $p < .001$ ) and 5.38 ( $p < .05$ ), respectively.

In Model 2 (Table 4), each one-unit increase in heavy drinking was associated with a 95% ( $p < .001$ ) and 69% ( $p < .05$ ) increase in the odds of having experienced incapacitated sexual victimization for heterosexuals and sexual minorities, respectively. Each one-unit increase in risky sexual behavior was associated with a 46% ( $p < .001$ ) increase in the odds of having experienced incapacitated sexual victimization for heterosexuals, but risky sexual behavior was not associated with incapacitated sexual victimization for sexual minorities. Being female was associated with an increase in the odds

**Table 4.** Logistic Regression Models for Types of Sexual Victimization by Sexual Orientation.

	<i>Forced SV (OR)</i>		<i>Incapacitated SV (OR)</i>		<i>Coerced SV (OR)</i>	
	<i>Model 1</i>		<i>Model 2</i>		<i>Model 3</i>	
	<i>Hetero</i>	<i>S-M</i>	<i>Hetero<sup>a</sup></i>	<i>S-M<sup>a</sup></i>	<i>Hetero<sup>a</sup></i>	<i>S-M<sup>a</sup></i>
CSA	4.51***	5.38*	1.21	1.03	2.72***	2.94
Heavy drinking	0.99	1.11	1.95***	1.69*	1.31***	1.29
Risky sexual behavior	1.44*	2.02	1.46***	1.39	1.66***	1.91*
Female	1.65	1.27	3.69***	1.47	2.73***	2.24
McFadden pseudo $R^2$	.07	.18	.12	.09	.09	.12

SV = sexual victimization; OR = odds ratio; Hetero = heterosexual; S-M = sexual minority; CSA = child sexual abuse.

a. Indicates higher risk for that group at Midwest campus compared with Southeast campus.

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

of having experienced incapacitated sexual victimization by a factor of 3.69 ( $p < .001$ ), but only for heterosexuals.

In Model 3 (Table 4), a history of child sexual abuse was associated with an increase in the odds of having experienced coerced sexual victimization by a factor of 2.72 ( $p < .001$ ) for heterosexuals. Heavy drinking increased the odds of having experienced coerced sexual victimization by 31% ( $p < .001$ ) for each one-unit increase for heterosexuals. In addition, for each unit increase in risky sexual behavior, the odds of having experienced coerced sexual victimization increased by a factor of 1.66 ( $p < .001$ ) for heterosexuals and 1.91 ( $p < .05$ ) for sexual minorities. Finally, the odds of being a victim of coerced sexual victimization was 173% higher for heterosexual females (OR = 2.73;  $p < .001$ ) compared with heterosexual males, but there was no significant difference for sexual minorities.<sup>3</sup>

## Discussion

Our study investigated whether prevalence and risk factors for three types of sexual victimization (i.e., forced, incapacitated, and coerced) differ by gender and sexual orientation and whether the intersection of gender and sexual orientation is correlated with sexual victimization among male and female college students. Overall, we find that heterosexual males experience lower rates of forced sexual victimization compared with sexual minority females, and lower rates of incapacitated sexual victimization in comparison with heterosexual and sexual minority females. Sexual minority females experience higher rates of coerced sexual victimization in comparison with

heterosexual females and heterosexual males. Moreover, child sexual abuse, risky sexual behaviors, and drinking are all positively associated with higher odds of being sexually victimized, though these relationships vary by victimization type, gender, and/or sexuality.

In terms of prevalence rates, our results show that heterosexual males consistently have the lowest rates of sexual victimization, and their level of significant difference from the other groups varies by sexual victimization type. Previous studies have typically used a gender dichotomy when examining risk factors for sexual victimization (Abbey & McAuslan, 2004; Wells et al., 2014) and have consistently found females to be at higher risk in comparison with males (Edwards et al., 2015; Fisher et al., 2000; Hines et al., 2012). Although few studies have focused on the intersection of gender and sexuality with sexual victimization, studies that do exist have mixed results (Coulter et al., 2017; Edwards et al., 2015). Current study results indicate that focusing only on the gender dichotomy (i.e., female vs. male) is insufficient for understanding sexual victimization as we found significant differences between groups (i.e., heterosexual females, sexual minority females, heterosexual males, and sexual minority males).

Consistent with previous research (Aosved et al., 2011; Hines et al., 2012), and in line with our first hypothesis, individuals with histories of child sexual abuse are at higher risk for experiencing forced and coerced sexual victimization. In addition, heavy drinking and risky sexual behavior are associated with experiencing both incapacitated and coerced sexual victimization, which is consistent with previous research (Palmer et al., 2010; Testa, VanZile-Tamsen, et al., 2004; Tyler et al., 2017) and provides partial support for our Hypotheses 2 and 3. For forced sexual victimization, risky sexual behavior was significantly related to increased risk, but only in the heterosexual subsample and in the male subsample. It is possible that due to our small sample of individuals who experienced forced sexual victimization, we were unable to detect significant differences among other risk factors. Another possible explanation is that risky sexual behavior is a larger risk factor for forced sexual victimization, but because most previous research generally has not examined different forms of sexual victimization, the impact of risk factors on different victimization types is largely unknown.

We find that the role of sexual orientation in the risk for sexual victimization varies by gender. Moreover, the risk associated with being a sexual minority varies by sexual victimization type. That is, sexual orientation was significant for both incapacitated and coerced sexual victimization in the male subsample. In the female subsample, however, we find that sexual orientation was only significant for coerced sexual victimization. These findings suggest that being a sexual minority functions differently based on gender and victimization type. Although there is a paucity of research in this area, a study by Coulter and colleagues (2017) found that bisexual women

had a much higher risk for sexual victimization compared with heterosexual women, whereas lesbian women had only a slightly higher risk compared with heterosexual women. Although Coulter et al.'s work explains differences in risk associated with sexual minority status and provides more inclusive categories of sexual orientation, their study does not separate out types of sexual victimization. Thus, further research is needed that incorporates greater specificity in sexual minority status (i.e., lesbian women and bisexual women) and separates risk by sexual victimization type (e.g., coerced vs. forced sexual victimization).

Our findings are generally consistent with lifestyle-exposure theory (Hindelang et al., 1978) and routine activity theory (Cohen & Felson, 1979). The lifestyle of many college students, which includes heavy drinking and participation in risky sexual behaviors (LaBrie et al., 2014; Turchik & Hassija, 2014), increases their likelihood of experiencing incapacitated and coerced sexual victimization. Moreover, we find differential risks for sexual victimization among groups. Sexual minority males are more likely to have experienced incapacitated and coerced sexual victimization in comparison with heterosexual males suggesting that being a sexual minority male is a characteristic that is congruent with the needs of some sexual offenders. Similarly, sexual minority females are more likely to have experienced coerced sexual victimization in comparison with heterosexual females suggesting that being a sexual minority female is also a characteristic that is congruent with the needs of some sexual offenders. In terms of gender, our results show that heterosexual females are at greater risk for sexual assault, specifically incapacitated and forced sexual assaults, compared with heterosexual males. This finding suggests that femaleness is also an attribute of the victim that is congruent with the needs and motives of some sexual offenders (Finkelhor & Asdigian, 1996) and thus supportive of these theories. Within our sample, both sexual orientation and gender are individual characteristics of target congruence, which are associated with sexual victimization.

### ***Limitations***

This study is not without limitations. Previous research has emphasized the need for further specificity in the examination of intersections of gender and sexual orientation. Although our study and other recent research (Coulter et al., 2017; Edwards et al., 2015) have made efforts to differentiate between sexual minority individuals, the current study is limited in separating individuals by gender. Relatedly, because we did not ask respondents their sexual orientation, we used an attitudinal measure that asked young people who they had romantic feelings for. As such, it is possible that some individuals were included in the sexual minority group, when they themselves

do not identify in that way or do not act upon the attractions they feel. Second, the construct measuring incapacitated sexual victimization could include either voluntary consumption (e.g., drinking at a party) or involuntary consumption (e.g., date rape drug such as rohypnol). Third, because all information is self-reported, there is the potential for underreporting due to the sensitive nature of the questions or the reference periods used. Fourth, because the data are cross-sectional and a sample of convenience, we cannot make inferences about causal ordering, only associations, and we cannot generalize these findings to all college students. Finally, although the overall sample size was large ( $N = 1,413$ ), power was reduced when the sample was divided by gender and sexual orientation (e.g., 50 sexual minority men). Subsequently, some results may not have been significant due to these smaller subgroup sizes.

Notwithstanding, our article makes several meaningful contributions to the literature. First, we examined three different forms of sexual victimization (forced, incapacitated, and coerced). Much research only focuses on a composite measure, but our results show that the type of sexual victimization matters. Child sexual abuse, an established correlate of sexual victimization risk (Aosved et al., 2011; Hines et al., 2012), is associated with both forced and coerced sexual victimization, but not incapacitated sexual victimization. Similarly, another correlate of sexual victimization, heavy drinking (Abbey et al., 1996; Palmer et al., 2010), was associated with incapacitated and coerced sexual victimization, but not forced sexual victimization. Because we examined different types of sexual victimization, we see more nuances and how different factors are uniquely associated with different forms of sexual victimization. Another contribution our study makes is that by examining the intersection of gender and sexuality, we are able to show that heterosexual females, sexual minority females, and sexual minority males are at risk for sexual victimization. This is an improvement over previous research, which has either ignored sexual orientation or combined sexual minority individuals into a single group.

Future research should continue to investigate how these less studied populations, males and sexual minorities, may experience unique forms of sexual victimization while in college. Moreover, the risks for sexual victimization may vary for each group. Although we have taken initial steps to address many of these shortcomings, future studies may wish to replicate our findings with behavioral measures of sexual orientation rather than attitudinal. In addition, future research may wish to examine whether the prevalence rates and risks associated with different forms of sexual victimization found in the current study can be replicated with other samples of college students.



## ***Implications***

Our results reveal that over 40% of our sample experienced one or more occurrences of sexual victimization in the past 12 months. Moreover, the risks associated with being a victim vary by sexual victimization type. Relatedly, risk factors associated with sexual victimization also vary by gender and sexual orientation. These findings highlight the importance of these characteristics (i.e., gender and sexual orientation) for sexual victimization risk. Campus-based interventions that highlight the different forms of sexual victimization and the unique risks that certain groups face will be better positioned to serve a diverse student body. In addition, our study shows that designing prevention programs that typify males only as perpetrators (Abbey & McAuslan, 2004; Wells et al., 2014) may mischaracterize a group that experiences some of the highest rates of sexual victimization—sexual minority males. Although males are generally perpetrators of sexual assault (Abbey & McAuslan, 2004), it is important to recognize that men can also be victims of sexual violence perpetrated by other males. This reasoning that males are the primary perpetrators is consistent with more recent college prevention efforts that place the onus of reducing sexual assault, both on and off campus, on males. A stronger focus on changing the social norms surrounding acceptable dating behaviors and sexual practices is needed. Finally, our findings also point to the need for campus-based efforts to more broadly educate college students about what is acceptable and unacceptable behavior, and how to create mutually respectful dating relationships regardless of gender and sexual orientation.

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**Supplemental Material** — Supplementary material for this article follows the **References**.

## **Notes**

1. Students had the option of filling out the survey for course credit. If they did not wish to complete the survey, they were given another option for extra credit. Students also were told that if they chose not to fill out the survey or do the alternative extra credit assignment, it would not affect their course grade.
2. Although not the focus of our article, all models control for campus location and we report all significant differences (see Tables 3 and 4).
3. We ran a total of 36 interactions between each correlate for each of the models. Only six interactions were significant (see the supplemental online appendix for results).

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Supplemental Table. Interactions between Risk Factors\*

	Forced SV				Incapacitated SV				Coerced SV			
	M	F	Het	S-M	M	F	Het	S-M	M	F	Het	S-M
CSA x Heavy Drinking								.301				
CSA x Risky Sexual Behavior												
Heavy Drinking x Risky Sexual Behavior		.548				.710	.818			.683	.814	

\*Includes interactions significant at  $p < .05$ .

Note: M = Male; F = Female; Het = Heterosexual; S-M = Sexual minority; SV = Sexual victimization; CSA = Child sexual abuse