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Document Title: The Campus Sexual Assault (CSA) Study

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Document No.: 221153

Date Received: December 2007

Award Number: 2004-WG-BX-0010

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October 2007

The Campus Sexual Assault (CSA) Study

Final Report

NIJ Grant No. 2004-WG-BX-0010

**Performance Period:
January 2005 through December 2007**

Prepared for

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Washington, DC 20001

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RTI Project Number 0209487

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*RTI International is a trade name of Research Triangle Institute.

Table of Contents

Section	Page
Abstract:	vii
EXECUTIVE SUMMARY	viii
1. Introduction	1-1
1.1 A Typology of Sexual Assault	1-3
1.1.1 Incapacitated Sexual Assault.....	1-4
2. Background	2-1
2.1 Prevalence Estimates for Sexual Assault Victimization.....	2-1
2.2 The Context of Campus Sexual Assault.....	2-3
2.3 Risk Factors Associated with Sexual Assault	2-5
2.3.1 Prior Victimization	2-5
2.3.2 Substance Use	2-6
2.3.3 Age and Year of Study	2-7
2.3.4 Race/Ethnicity.....	2-7
2.3.5 Residential Status	2-7
2.3.6 Sorority Membership.....	2-7
2.3.7 Dating Violence History	2-8
2.3.8 Consensual Sexual Experiences	2-8
2.3.9 Attitudinal Characteristics	2-8
2.4 Reporting of Sexual Assault	2-9
2.5 Perpetration of Campus Sexual Assault.....	2-11
3. Research Methods	3-1
3.1 Data Collection	3-1
3.1.1 Sampling	3-2
3.1.2 Recruitment Procedures and Response Rates.....	3-2
3.1.3 Web Site and Survey Design and Content	3-2
3.1.4 Incentive Redemption	3-5
3.2 Data Handling.....	3-6

3.2.1	Data Preparation and Cleaning	3-6
3.2.2	Response Bias Analyses	3-7
3.3	Data Analysis	3-10
3.3.1	Descriptive Analyses	3-10
3.3.2	Risk Factors for Sexual Assault	3-13
4.	Study Sample	4-1
4.1	Women	4-1
4.2	Men	4-1
5.	Findings	5-1
5.1	Sexual Assault Victimization	5-1
5.1.1	Prevalence Estimates	5-1
5.1.2	Risk Factors Associated with Sexual Assault Among University Women	5-6
5.1.3	Context	5-14
5.1.4	Reporting and Nonreporting	5-21
5.1.5	Consequences	5-26
5.2	Sexual Assault Perpetration	5-27
6.	Conclusion and Recommendations	6-1
6.1	Summary of Findings	6-1
6.2	CSA Study Implications	6-3
6.3	CSA Study Limitations	6-6
6.4	Conclusion	6-7
7.	Future Directions	7-1
	References	1

List of Exhibits

Exhibit	Page
1-1. Basic Sexual Assault Typology	1-7
3-1. Diagram of Sampling Frames, Sampling Subframes, Samples, and Respondents	3-3
3-2. Sexual Assault Prevalence Measures	3-12
4-1. Descriptive Data on CSA Sample of Undergraduate Women, Weighted Percentages (n = 5,446) ^a	4-2
4-2. Descriptive Data on CSA Sample of Undergraduate Men, Weighted Percentages (n = 1,375) ^a	4-4
5-1. Prevalence Estimates for the Sexual Assault Measures for Women, Unweighted Frequencies, Weighted Percentages	5-2
5-2. Percentage of Undergraduate Women Who Report Being a Victim of Forced and Incapacitated Sexual Assault Before and Since Entering College.....	5-3
5-3. Percentage of Victims of Physically Forced and Incapacitated Sexual Assault Who Experienced Sexual Battery Only and Rape	5-4
5-4. Prevalence Estimates for the Sexual Assault Measures for Men, Unweighted Frequencies, Weighted Percentages	5-6
5-5. Prevalence of Various Measures of Sexual Assault Within Demographic and Behavioral Factors for Undergraduate Women (n = 5,361) ^a	5-8
5-6. Logistic Regression Models of Four Sexual Assault Measures (n = 4,646) ^a	5-11
5-7. Percentage of Victims (by Sexual Assault [SA] Type) Reporting Various Victimization Contextual Factors, Unweighted Frequencies, Weighted Percentages ^a	5-15
5-8. Reporting of Sexual Assault (SA), by Assault Type, Unweighted Frequencies, Weighted Percentages ^a	5-22
5-9. Consequences of Sexual Assault (SA), by Assault Type, Unweighted Frequencies, Weighted Percentages ^a	5-27

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ABSTRACT:

THE CAMPUS SEXUAL ASSAULT (CSA) STUDY

Sexual assault is a public health and public safety problem with far-reaching implications. Although a substantial body of research on sexual assault exists, additional data are needed to help document the current magnitude of the problem, the extent to which certain subpopulations are impacted, the consequences and reporting (or nonreporting) of victimization incidents, and strategies for preventing and reducing the risk of sexual assault and effectively responding to victims.

One subpopulation that is often believed to be at elevated risk for sexual assault is college students. RTI International (RTI) was funded by the National Institute of Justice (NIJ) to conduct the Campus Sexual Assault (CSA) Study, which is a study of various types of sexual assault experienced by university students. This study has one primary research objective.

1. To examine the prevalence, nature, and reporting of various types of sexual assault experienced by university students in an effort to inform the development of targeted intervention strategies.

In addition, the CSA Study has two service-oriented objectives, the success towards which were not measured and are thus not the subject of this final report. These objectives are, however, worth mentioning.

2. To educate students about various types of sexual assault, how they can maximize their safety, and what they can do if they or someone they know has been victimized.
3. To provide students with information about the campus and community resources that are available should they need assistance or have any concerns or questions.

RTI has been working with two large, public universities on the CSA Study. Data were collected using a Web-based survey from over 6,800 undergraduate students (5,466 women and 1,375 men). Data indicate that 13.7% of undergraduate women had been victims of at least one completed sexual assault since entering college: 4.7% were victims of physically forced sexual assault; 7.8% of women were sexually assaulted when they were incapacitated after voluntarily consuming drugs and/or alcohol (i.e., they were victims of alcohol and/or other drug- [AOD] enabled sexual assault); 0.6% were sexually assaulted when they were incapacitated after having been given a drug without their knowledge (i.e., they were certain they had been victims of drug-facilitated sexual assault [DFSA]). Detailed data were collected on the context, reporting, and consequences of sexual assault. Self-reported rates of sexual assault victimization and perpetration among males were very low. The primary implications of the CSA Study are the relative rarity of cases of DFSA and the need to incorporate alcohol and drug messages into sexual assault prevention and risk reduction programming.

EXECUTIVE SUMMARY

Sexual assault is a public health and public safety problem with far-reaching implications. Being a victim of sexual assault is one of the most violating experiences anyone can endure and can cause immediate, as well as long-term, physical and mental health consequences. Of rape victims, 25% to 45% suffer from nongenital trauma; 19% to 22% suffer from genital trauma; up to 40% get sexually transmitted diseases (STDs); and 1% to 5% become pregnant, resulting in an estimated 32,000 rape-related pregnancies in the United States annually (Holmes, Resnick, Kirkpatrick, & Best, 1996). Four out of five rape victims subsequently suffer from chronic physical or psychological conditions (Strategies for the Treatment and Prevention of Sexual Assault, 1995), and rape victims are 13 times more likely to attempt suicide than noncrime victims and six times more likely than victims of other crimes (Rape in America: A Report to the Nation, 1992). Overall, rape is believed to carry the highest annual victim cost of any crime. The annual victim costs are \$127 billion (excluding child sex abuse cases), followed by assault at \$93 billion per year, murder (excluding arson and drunk driving) at \$61 billion per year, and child abuse at \$56 billion per year (Miller, Cohen, & Wierama, 1996).

Given the substantial impact sexual victimization has on individual victims and society, collecting information that advances our understanding of sexual assault and helps us prevent victimization and better meet the needs of victims is critical. Much research has been published about the sexual assault experiences of college women, a group often characterized as being at high risk for sexual victimization. Researchers have consistently reported that a sizable percentage of women are sexually assaulted during their college years, with, on average, at least 50% of their sexual assaults involving the use of alcohol or other drugs by the perpetrator, victim, or both (Abbey, 2002; Fisher et al., 2000; Testa & Parks, 1996).

RTI International was funded by the National Institute of Justice (NIJ) to conduct the Campus Sexual Assault (CSA) Study. The CSA Study was undertaken specifically to document the prevalence of distinct types of sexual assault among university women (with “types” defined by how the assault was achieved, such as the use of physical force or incapacitation of the victim due to drugs or alcohol), as well as the context, consequences, and reporting of distinct types of sexual assault among a large sample of undergraduate women from two large universities. In the CSA Study, sexual assault includes a wide range

of victimizations, including rape and other types of unwanted sexual contact (e.g., sexual battery).

The typology that guides the classification of sexual assault in the CSA Study is based on *how* the assault (or attempted assault) was achieved. Virtually all sexual assault research distinguishes between assaults occurring as a result of *physical force* (or threats of physical force) from assaults that do not involve the use or threat of force; the CSA Study similarly considers physically forced sexual assault as a distinct category of assault. Another means through which sexual assault is achieved is *incapacitation of the victim*. Legal definitions of sexual assault factor in one's ability to provide consent, and individuals who are incapacitated because of the effects of alcohol or drugs (or otherwise incapacitated, such as when they are unconscious or asleep) are incapable of consenting. In the CSA Study, we consider as *incapacitated sexual assault* any unwanted sexual contact occurring when a victim is unable to provide consent or stop what is happening because she is passed out, drugged, drunk, incapacitated, or asleep, regardless of whether the perpetrator was responsible for her substance use or whether substances were administered without her knowledge. We break down incapacitated sexual assault into four subtypes. The first two subtypes pertain to sexual assaults achieved when the victim is given—without her knowledge or consent—a substance that physically incapacitates her and makes her incapable of providing consent. *DFSA* (drug-facilitated sexual assault) is defined as unwanted sexual contact occurring when the victim is incapacitated and unable to provide consent after she had been given a drug without her knowledge or consent. Incidents classified as DFSA are those in which the victim is *certain* that she had been drugged. In contrast, *SDFSA* (suspected drug-facilitated sexual assault) is defined as incapacitated sexual assault occurring after the victim *suspects* that she had been given a drug without her knowledge or consent. The third type of incapacitated sexual assault considered in the CSA Study is termed *alcohol and/or other drug- (AOD-) enabled sexual assault*. This subtype includes unwanted sexual contact occurring when the victim is incapacitated and unable to provide consent because of voluntary consumption of alcohol or other drugs. Finally, to distinguish between incapacitation due to the effects of AOD (administered either coercively or voluntarily) and other types of incapacitation, we include a fourth type of incapacitated sexual assault in our typology. *Other incapacitated sexual assaults* capture the remaining, and likely uncommon, situations in which a victim can be incapacitated, such as by being asleep or unconscious.

The CSA Study builds upon previous research and makes a number of contributions to the field. The CSA Study is one of the first to generate estimates of the prevalence of drug-facilitated sexual assault (DFSA) among a college sample. The concept of DFSA has received widespread attention from the media and a variety of stakeholders, including prevention and risk reduction specialists, treatment providers, law enforcement, and university administrators, but empirical data on the prevalence and nature of this phenomenon have yet to appear in the literature. In addition, the CSA study explores the extent to which risk factors vary by type of assault. We believe this is the first study to find that the type of sexual assault a woman has experienced in the past puts her at risk for experiencing that same type, but not another type, of sexual assault in the future. A finding like this may help prevention and service providers tailor their efforts and take into account what type of sexual assault a woman has experienced or may be at risk of experiencing.

METHODS

The CSA Study involved conducting a Web-based survey of random samples of undergraduate students at two large public universities, one located in the South (University 1) and one located in the Midwest (University 2). The CSA Survey was administered in the Winter of 2006, and a total of 5,446 undergraduate women and 1,375 undergraduate men participated. Because the male component of the study was exploratory, the data and results presented in this summary represent women only. The CSA Study was reviewed and approved by RTI's Institutional Review Board (IRB), as well as the university IRBs.

We drew random samples of students aged 18-25 and enrolled at least three-quarters' time at each university to participate in the CSA Study. Sampled students were sent an initial recruitment e-mail that described the study, provided a unique CSA Study ID#, and included a hyperlink to the CSA Study Web site. During each of the following weeks, students who had not completed the survey were sent follow-up e-mails and a hard-copy letter encouraging them to participate. The overall response rates for survey completion for the undergraduate women sampled at the two universities were 42.2% and 42.8%, respectively.

A nonresponse bias analysis was conducted to create sample weights. We compared respondents and nonrespondents on the administrative data elements provided by the universities, which included age, university, race/ethnicity, and year of study. Although little nonresponse bias was detected, weights adjusting for non-response were developed using a Generalized Exponential Model (Folsom & Singh, 2000) to reduce nonresponse bias and

increase sample representativeness. Cohen's effect size was used as a measure of the magnitude of the bias, and weights were added for university, gender, year of study, and race/ethnicity, which reduced the bias to negligible levels (Cohen, 1988). All prevalence estimates and multivariate models were computed using weighted data.

The survey was administered anonymously (students did not enter their CSA Study ID # to take the survey) and was designed to be completed in an average of 15 minutes. The survey was divided into six modules. **Background Information** which included survey items on demographics, school classification (year of study, year of enrollment, transfer status), residential characteristics, academic performance, and school involvement.

Alcohol and Other Drug Use generated a number of measures of alcohol and drug use, and related substance use behaviors. **Dating** included items on sexual orientation, dating, consensual sexual activity, and dating violence. The **Experiences** module was developed after extensive reviews of past surveys of sexual assault¹ and generated information on physically forced sexual assault and incapacitated sexual assault. Sexual assault included forced touching of a sexual nature, oral sex, sexual intercourse, anal sex, and/or sexual penetration with a finger or object. For both physically forced and incapacitated sexual assault, information was collected on *completed* and *attempted* assaults experienced *before entering college* and *since entering college*. For completed sexual assaults, a series of follow-up questions enabled us to define the assault as sexual battery (i.e., sexual assault that entailed sexual touching only) and/or rape (i.e., sexual assault that entailed oral, vaginal, or anal penetration). For male respondents, a **Behaviors** module asking about the perpetration of the same types of sexual assault covered in the Experiences module was included. The final module of the survey covered attitudes about sexual assault (respondents were given seven scenarios and asked to classify them as rape) and attitudes about the survey (the degree of honesty they employed when answering the survey questions).

After the last survey question was answered, respondents were presented with an informational module on sexual assault (e.g., sexual assault definitions, prevention advice, legal consequences of giving someone a drug without their knowledge or consent, signs of drug ingestion, and links and telephone numbers to local, state, and national resources for sexual assault victims). In addition, respondents were provided with a survey completion

¹Previous studies reviewed included, but were not limited to, the National College Women Survey (Koss et al. 1987), the College Alcohol Study (Mohler-Kuo et al., 2004), the National Violence Against Women Survey (Tjaden & Thoennes, 2000), and the National College Women Sexual Victimization Survey (Fisher et al. 2000).

code that, when entered with their CSA Study ID# at a separate website, enabled them to obtain a \$10 Amazon.com gift certificate.

RESULTS

We used a variety of descriptive, bivariate, and multivariate techniques to analyze the CSA data. Essentially, these analyses helped us 1) generate prevalence estimates of different types of sexual assault, 2) identify factors associated with being a victim of different types of sexual assault, and 3) describe the contexts, consequences, and reporting of different types of sexual assault.

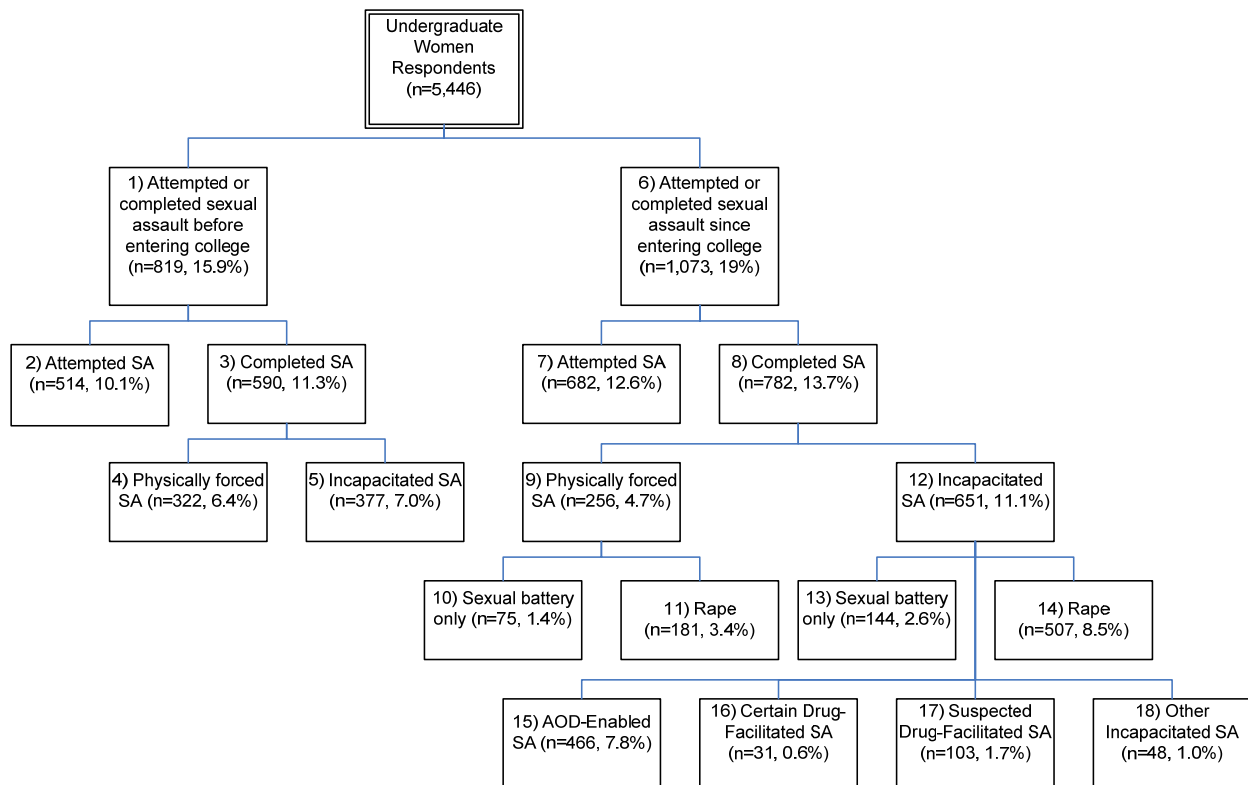
The majority (66.9%) of the undergraduate women who participated in the CSA Study were white, although a sizeable proportion of them were black (16.2%) or in the “other” category (14.0%) which includes Asians, Native Hawaiians/Other Pacific Islanders, American Indians/Alaska Natives and respondents of multiple races. Only 3.0% of the sample was Hispanic. The majority of the sample was 18 to 20 years of age (63%). There were larger percentages of freshman (29.9%) and seniors (26.6%) than sophomores (22.8%) and juniors (20.7%) in the sample. This distribution reflected the distribution at the participating universities since the data were weighted for year of study.

Prevalence Estimates of Sexual Assault Before and Since Entering College

Of the 5,446 women, 28.5% reported having experienced an attempted or completed sexual assault either before or since entering college. Figure 1 presents the estimates for the various types of sexual assault experienced by the women. Nearly 16% of the 5,446 women experienced attempted or completed sexual assault *before entering college* (box 1). Almost equal percentages experienced attempted sexual assault before college (10.1%, box 2) and completed sexual assault before college (11.3%, box 3). Of course, some women (5.5%) experienced both attempted and completed sexual assault before entering college (i.e., the women represented in box 2 and box 3 are not mutually exclusive). Similar percentages of women experienced completed physically forced assault (6.4%, box 4) and incapacitated sexual assault (7.0%, box 5) before entering college. Note that 2.1% of the study women experienced both physically forced and incapacitated sexual assault before entering college (i.e., the women represented in box 4 and box 5 are not mutually exclusive).

Nineteen percent of the women reported experiencing completed or attempted sexual assault *since entering college* (box 6), a slightly larger percentage than those experiencing such incidents before entering college (box 1). Since entering college, slightly more women experienced completed sexual assault (13.7%, box 8) than attempted sexual assault (12.6%, box 7), with 7.2% of the women experiencing both completed sexual assault and attempted sexual assault during college (i.e., the women represented in box 7 and box 8 are not mutually exclusive).

Figure 1. The Prevalence of Different Types of Sexual Assault Before and Since Entering College (Unweighted Frequencies, Weighted Percentages)



Nearly 5% of the total sample was forcibly sexually assaulted since college entry (4.7%, box 9). More than three percent of the women (3.4%) experienced forced rape since entering college (box 11) and 1.4% experienced forced sexual battery since entering college (box 10). Approximately 11% of the women experienced sexual assault while incapacitated since entering college (box 12), with a higher percentage of women being victims of incapacitated rape than incapacitated sexual battery since entering college (8.5%, box 14 compared to 2.6%, box 13, respectively). It is important to note that AOD-enabled sexual assault was

experienced by 7.8% of the women since entering college (box 15). In contrast, smaller percentages of women experienced drug-facilitated sexual assault that they were certain happened (0.6%, box 16), that they suspected happened (1.7%, box 17), or some other type of incapacitated sexual assault (1.0%, box 18).

Risk Factors for Sexual Assault Since Entering College

Three multivariate models were used to identify how prior sexual victimization, substance use, lifestyle activities, and demographic characteristics were associated with women's risk of experiencing physically forced sexual assault only, incapacitated sexual assault only, or both physically forced and incapacitated sexual assault since entering college. Results from each of the three models are presented in Figure 2. Overall, the findings suggested that although several risk factors were consistently associated with all types of sexual assault, there were also some clear differences by sexual assault type.

Physically Forced Sexual Assault. Women who experienced physically forced sexual assault before entering college had almost 7 times the odds of experiencing forced sexual assault since entering college (OR = 6.6) compared to other women. However, experiencing sexual assault when incapacitated before college was not significantly associated with experiencing forced sexual assault since entering college.

None of the five measures of substance use since entering college were statistically associated with being a victim of forced sexual assault during college. The number of sexual partners women had since entering college was significantly and positively associated with an increased risk of forced sexual assault (OR = 1.4). In addition, women who had been threatened/humiliated and/or physically hurt by a dating partner since entering college had just over 7 times the odds of experiencing forced sexual assault since entering college (OR = 7.4) compared to other women.

Regarding demographics, no racial/ethnic differences emerged. Years in college was positively associated with experiencing physically forced sexual assault since entering college (OR = 1.2). This finding is not surprising given that the more years a woman has been in college, the more exposure she has had to potentially being assaulted since entering college. However, upon examining *when* sexual assault is most likely to occur (by restricting the analyses to sexual assaults occurring within the past 12 months, or since entering college for freshmen), the risk was greater for freshmen and sophomores than for juniors and seniors (data not shown).

Incapacitated Sexual Assault. A rather different set of risk factors was associated with incapacitated sexual assault. Experiencing incapacitated sexual assault before college increased the odds of experiencing incapacitated sexual assault since entering college more than three-fold (OR = 3.7); however, experiencing physically forced sexual assault before college was not significantly associated with experiencing incapacitated sexual assault since entering college.

All but one of the substance use measures were significantly and positively associated with the likelihood of experiencing incapacitated sexual assault since entering college. The frequencies with which women reported getting drunk since entering college increased the odds of being an incapacitated sexual assault victim (OR = 1.7), as did marijuana use (OR = 1.5); however, voluntary use of other illicit drugs was not associated with experiencing incapacitated sexual assault since entering college. The frequency with which women reported being drunk during sex also increased the odds of being a victim of incapacitated sexual assault (OR = 1.5), and having been given a drug without one's knowledge or consent since entering college increased the odds of being a victim of incapacitated assault since entering college (OR = 2.8).

The frequency with which women attended fraternity parties since entering college was positively associated with being a victim of incapacitated sexual assault (OR=1.4). Women who were humiliated or hurt by a dating partner had just over 2 times the odds of being a victim of incapacitated sexual assault since entering college (OR = 2.2), compared to other women. As seen in the analysis of physically forced sexual assaults, the more years a woman has been in college, the greater the odds that she experienced incapacitated assault.

Both Physically Forced and Incapacitated Sexual Assault. Victims of forced sexual assault before college had higher odds (OR = 3.7) of experiencing both types of sexual assault since entering college. The same was true for victims of incapacitated sexual assault before college (OR = 2.1). Also interesting is that when the individual indicators for physically forced sexual assault before college and incapacitated sexual assault before college were replaced with a single combined indicator for experienced *both* physically forced *and* incapacitated sexual assault before college, those women who experienced both types of prior victimizations (n=109) had almost 8 times the odds of experienced both physically forced and incapacitated sexual assault during college, compared to other women (OR = 7.8, analyses not shown).

The frequency with which women reported getting drunk since entering college was positively associated with being a victim of both physically forced and incapacitated assault (OR = 1.7). In addition, having been given a drug without one's knowledge or consent since entering college was strongly associated with experiencing both types of assault during college (OR = 6.7). The number of sexual partners a woman has had since entering college increased the risk of being a victim of both types of sexual victimization since entering college (OR = 1.3). As in the models of women's experiences with physically forced sexual assault or incapacitated sexual assault, the model of *both* physically forced sexual assault and incapacitated sexual assault indicated that the measure of women's experiences with dating partner violence was strongly associated with experiencing both types of sexual assault (OR = 5.2). Only one demographic variable was significantly associated with experiencing both physically forced and incapacitated sexual assault during college. Women in the "other" race category, compared to being white, had an increased odds of experiencing both physically forced and incapacitated sexual assault since entering college (OR = 2.0).

Context, Consequences, Reporting of Sexual Assault Since Entering College

Based on the extensive follow-up questions asked of women who reported experiencing sexual assault, several findings related to the context of sexual assault were generated from the study. Regarding characteristics of the assailant, few victims reported being assaulted by someone they had never seen or talked to before, with victims of physically forced sexual assault much more likely than incapacitated assault victims to be assaulted by someone they had never seen or talked to (23% vs. 12%, respectively), or by a former intimate partner (20% vs. 9%, respectively). Over a quarter of incapacitated sexual assault victims reported that the assailant was a fraternity member at the time of the incident; this proportion is significantly higher than that reported by victims of physically forced sexual assault (28% vs. 14%, respectively). Not surprisingly, the vast majority of incapacitated sexual assault victims (89%) reported drinking alcohol, and being drunk (82%), prior to their victimization. This is much higher than the proportion of physically forced victims who reported drinking (33%) and being drunk (13%) prior to their assault. Drug use was relatively low among both groups, although a slightly higher proportion of incapacitated sexual assault victims reported having voluntarily used drugs before the incident (8% vs. 2%). A surprisingly large number of respondents reported that they were at a party when the incident happened, with a significantly larger proportion of incapacitated sexual assault victims reporting this setting (58% compared with 28%). The majority of sexual assault

victims of both types reported that the incident had happened off campus (61% of incapacitated sexual assault victims and 63% of physically forced sexual assault victims). A low proportion of victims reporting that sustaining injuries in the assault, although more physically forced sexual assault victims (18%) reported being injured than incapacitated sexual assault victims (3%).

Several findings regarding the informal and formal reporting of the event are also of interest. The majority of victims of both types of assault (70% of physically forced victims and 64% of incapacitated sexual assault victims) reported that they told someone such as a family member, friend, roommate, or intimate partner. A very small percentage of victims reported that they contacted a victim's, crisis, or health care center after the incident. This type of disclosure was more prevalent among physically forced sexual assault victims (16%) than incapacitated sexual assault victims (8%). A similarly small proportion of victims of both types of sexual assault stated that they reported the incident to a law enforcement agency, with incapacitated sexual assault victims once again being less likely to report the incident (2% vs. 13%). Of the victims who did not report the incident to law enforcement, the most commonly reported reasons for non-reporting were that they did not think it was serious enough to report (endorsed by 56% of physically forced sexual assault victims and 67% of incapacitated sexual assault victims), that it was unclear that a crime was committed or that harm was intended (endorsed by just over 35% of both types of victims), and that they did not want anyone to know about the incident (endorsed by 42% of physically forced sexual assault victims and 29% of incapacitated sexual assault victims).

Victims were asked about other actions they took as a result of the incident and consequences received by the assailant. Beyond avoiding or trying to avoid the assailant (reported by about two-thirds of victims of both sexual assault types), respondents were unlikely to report action stemming from the assault. Twenty-two percent of physically forced sexual assault victims and 6% of incapacitated sexual assault victims reported that they sought psychological counseling, a statistically significant difference. Not surprisingly, given the very low percentage of victims who reported the incident to law enforcement, a very small number of victims of either type of sexual assault reported that they pursued any action against the assailant, including seeking a restraining order, filing civil charges, pursuing criminal charges, or filing a grievance or initiating other disciplinary action with university officials. A very small number of victims reported that the assailant received any disciplinary action from the university or that the assailant was arrested, prosecuted, or convicted by the criminal justice system.

CONCLUSIONS AND RECOMMENDATIONS

Sexual assault is clearly an issue in need of attention by the campus community given its high prevalence and adverse consequences, and the CSA Study results carry many social and policy-oriented implications. One out of five undergraduate women experience an attempted or completed sexual assault during their college years, with:

- the majority of sexual assaults occurring when women are incapacitated due to their use of substances, primarily alcohol;
- freshmen and sophomores at greater risk for victimization than juniors and seniors; and
- the large majority of victims of sexual assault being victimized by men they know and trust, rather than strangers.

It is important that sexual assault prevention strategies and messages be designed such that undergraduates are educated (and as soon after enrollment as possible) about these facts. Programs should focus on both primary prevention for women who have not experienced sexual assault and secondary prevention in an effort to prevent re-victimization (although more research is needed to guide the development of effective secondary prevention programming).

Sexual assault prevention programs for women could:

- Provide accurate information on legal definitions of sexual assault, the extent and nature of sexual assault among college women, and risk factors for sexual assault (e.g., risky sexual behaviors, multiple sex partners, the role of substances);
- Combine sexual assault prevention education with alcohol and drug education programming (e.g., education concerning how levels of alcohol consumption and use of different drugs, and their interactions, affect cognitive functions; harm reduction messages; education about the impact of alcohol and drug use, especially heavy episodic drinking, has on cognitive functions, which reduces one's ability to detect dangerous cues and threats, and one's ability to effectively resist unwanted advances that can arise in common college social situations);
- Stress that even though many sexual assaults involves substance use by the victim, this does not imply that women are to blame for their sexual assault. Victimization is

committed by the perpetrator, and therefore the sole responsibility for the assault lies with the perpetrator;

- Educate women about different types of sexual assault, especially since there appears to be continuity in the type of sexual assault experienced over time (physically forced or incapacitated sexual assault);
- Teach effective sexual assault resistance strategies to reduce harm, particularly with respect to strategies for protection from men that women know and trust;
- Educate women about how to increase their assertiveness and self-efficacy;
- Convey knowledge about how to report to police or school officials, the availability of different types of services on and off campus;
- Stress the importance of reporting incidents of attempted and completed sexual assault to mental and/or physical health service providers and security/law enforcement personnel, and the importance to seeking services, especially given the well-documented negative impacts sexual assault can have on psychological and physical functioning.

In addition, programs for men to prevent sexual assault perpetration could:

- Provide accurate information on legal definitions of and legal penalties for sexual assault;
- Inform men that they are ultimately responsible for determining (1) whether or not a woman has consented to sexual contact, and (2) whether or not a woman is capable of providing consent; and
- Educate men that an intoxicated person cannot legally consent to sexual contact and that having sexual contact with an intoxicated or incapacitated person is unacceptable.

All of these prevention programs should be tailored to include risk factors that both college women and men encounter in common college social interactions/situations. Moreover, the programs should be designed as continuing educational curriculums rather than brief, “one shot” doses since research suggests that the former approach is more helpful.

The Campus Sexual Assault (CSA) Study

Sexual assault is a serious social, public safety, and public health problem that affects men and women across the country. The CSA Study data suggest women at universities are at considerable risk for experiencing sexual assault, especially sexual assault occurring after the voluntary consumption of alcohol, and that a number of personal and behavioral factors are associated with increased risk. It is our hope that universities can take the information produced by the CSA Study and use it to reduce the prevalence of sexual assault, as well as improve the resources for and response to sexual assault victims.

1. INTRODUCTION

Sexual assault is a public health and public safety problem with far-reaching implications. Being a victim of sexual assault is one of the most violating experiences anyone can endure and can cause immediate, as well as long-term, physical and mental health consequences. Of rape victims, 25% to 45% suffer from nongenital trauma; 19% to 22% suffer from genital trauma; up to 40% get sexually transmitted diseases (STDs); and 1% to 5% become pregnant, resulting in an estimated 32,000 rape-related pregnancies in the United States annually (Holmes, Resnick, Kirkpatrick, & Best, 1996). Victims of sexual assault report increasing their visits to physicians by 18% the year of the assault, by 56% the year after the assault, and by 31% 2 years after the assault (Koss, 1993). Four out of five rape victims subsequently suffer from chronic physical or psychological conditions (Strategies for the Treatment and Prevention of Sexual Assault, 1995), and rape victims are 13 times more likely to attempt suicide than noncrime victims and six times more likely than victims of other crimes (Rape in America: A Report to the Nation, 1992). An estimated 25% to 50% of rape and child sexual abuse victims receive some sort of mental health treatment as a result of the victimization (Miller, Cohen, & Wierama, 1996). Overall, rape is believed to carry the highest annual victim cost of any crime. The annual victim costs are \$127 billion (excluding child sex abuse cases), followed by assault at \$93 billion per year, murder (excluding arson and drunk driving) at \$61 billion per year, and child abuse at \$56 billion per year (Miller, Cohen, & Wierama, 1996).

Given the substantial impact sexual victimization has on individual victims and society, collecting information that advances our understanding of sexual assault and helps us prevent victimization and better meet the needs of victims is critical. Although a substantial body of research exists, additional data are needed to help document the current magnitude of the problem, the extent to which certain subpopulations are impacted, the consequences and reporting (or nonreporting) of victimization incidents, and strategies for preventing perpetration and reducing victims' risk of sexual assault and effectively respond to victims.

One subpopulation that is often believed to be at elevated risk for sexual assault is college students. Although methodological variation renders comparisons difficult to make, some previous studies suggest that university women are at greater risk than women of a comparable age in the general population (Fisher, Cullen, & Turner, 2000; DeKeseredy & Kelly, 1993; Koss, Gidycz, & Wisniewski, 1987). This pattern is likely due to the close daily interaction between men and women in a range of social situations experienced in university settings (Fisher, Sloan, Cullen, & Lu, 1988), as well as frequent exposure to alcohol and other drugs.

The risk of sexual assault related to alcohol and/or other drug consumption is particularly high among university women. The relationship between substance use and sexual assault experienced by university women has been well documented (Mohler-Kuo, Dowdall, Koss, &

Wechsler; 2004; Tyler, Hoyt, & Whitbeck, 1998; Koss & Dinero, 1989; Koss, Gidycz, & Wisniewski, 1987; Muehlenhard & Ma, 1987). Specifically, previous researchers have: 1) identified high levels of “pre-assault” alcohol use (i.e., alcohol use at the time of the incident) among both victims and perpetrators of sexual assault (Hindmarch & Brinkmann, 1994; Koss & Dinero, 1989; Muehlenhard & Ma, 1987), 2) established that general drinking behavior (i.e., not limited to pre-assault) on the part of college women is risk factor for subsequent sexual assault victimization (Fisher, Cullen, and Turner, 2000; Greene and Navarro 1998; Mohler-Kuo et al., 2004), and 3) documented that substance abuse is a consequence of sexual assault (Kaysen, Neighbors, Martell, Fossos, and Larimer, in press; Gidycz, Hanson, & Layman, 1995; Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997). However, the role of alcohol and drugs in *achieving* sexual assault is not well understood, and the nature of this relationship can take several forms. For example, some assaults are directly facilitated by coercive or nonconsensual drug ingestion, and others are enabled by the victim being incapacitated through voluntary alcohol or drug use. Developing a typology of sexual assault and understanding the frequency and context of each type of assault could have important prevention, risk reduction, and response implications.

RTI International was funded by the National Institute of Justice (NIJ) to conduct the Campus Sexual Assault (CSA) Study. The CSA Study was undertaken specifically to document the prevalence of distinct types of sexual assault among university women, as well as the context, consequences, and reporting of distinct types of sexual assault among a large sample of undergraduate women from two large universities. In the CSA Study, sexual assault includes a wide range of victimizations, including rape and other types of unwanted sexual contact (e.g., sexual battery). Consistent with previous research and most legal definitions, we define rape as unwanted sexual penetration (vaginal, anal, oral, or object penetration by an offender) achieved either through physical force, threat of force, or incapacitation of the victim.

The CSA Study builds upon previous research and makes a number of contributions to the field. First, the CSA Study is one of the first to generate estimates of the prevalence of drug-facilitated sexual assault (DFSA), which is when a woman is sexually assaulted when she is incapacitated after having been given a drug without her knowledge or consent, among a college sample. The concept of DFSA has received widespread attention from the media and a variety of stakeholders, including prevention and risk reduction specialists, treatment providers, law enforcement, and university administrators, but empirical data on the prevalence and nature of this phenomenon have yet to appear in the literature. Second, we collected the CSA data using a Web-based survey. This methodology is incredibly efficient and allowed respondents to answer the CSA survey questions on their own time and in complete privacy. We documented that it is possible to collect these data using a Web-based survey, which is important since collecting data using a computerized, self-administered surveys has proven to increase the quality and validity of data (Turner, et al.

1998). Many interviewer-administered or group-administered modes that have been used in the past to collect these data introduce threats to validity and human subjects-related concerns. Third, we explore some potential risk factors for sexual assault with more specificity than have previous researchers. For example, we explore whether risk factors vary by type of assault and we believe this is the first study to find that the type of sexual assault a woman has experienced in the past puts her at risk for experiencing that same type, but not another type, of sexual assault in the future. A finding like this may help prevention and service providers tailor their efforts and take into account what type of sexual assault a woman has experienced or may be at risk of experiencing.

1.1 A Typology of Sexual Assault

Researchers in the field of sexual victimization have long recognized that the variability in the types of sexual assaults suggests the need to classify incidents into distinct types. For example, one commonly used classification is based on the relationship between the perpetrator and the victim, distinguishing between stranger rapes and acquaintance rapes (with the latter category often further classified into date rapes and acquaintance rapes). This classification is based on the recognition that the various assault types occur under different circumstances and that these circumstances sometimes differentially impact the victim and related outcomes (e.g., likelihood of reporting). Although useful in informing the content of prevention programs, the fact that the vast majority of sexual assaults (both in the general population and among university women) are committed by individuals known to the offender limits the utility of this classification (when employed in isolation).

Another typology, and one that guides the classification of sexual assault in the CSA Study, is based on *how* the assault was achieved. Virtually all sexual assault research distinguishes between assaults occurring as a result of *physical force or threats of physical force* from assaults that do not involve the use or threat of force. In the CSA Study, we consider physically forced sexual assault as a distinct category of assault. Many studies also attempt to capture unwanted sexual contact achieved by the use of *verbal or emotional coercion*. This type of sexual encounter, although unwanted or regretted, is often not classified as sexual victimization or sexual assault. In the CSA Study, we measure unwanted sexual contact resulting from verbal/emotional coercion but do not include it as a type of sexual assault. A third means through which sexual assault is achieved is *incapacitation of the victim*. Legal definitions of sexual assault factor in one's ability to provide consent, and individuals who are incapacitated because of the effects of alcohol or drugs (or otherwise incapacitated, such as when they are unconscious or asleep) are incapable of consenting. Unlike sexual contact achieved by physical force or verbal/emotional coercion, previous research on incapacitated sexual assault has not been approached with consistency from either a conceptual or measurement perspective. Because a primary goal of the CSA Study is to contribute to the knowledge about incapacitated sexual assault (with incapacitated

sexual assault treated as a distinct type of sexual assault in the CSA Study, with several subtypes identified), the manner in which previous research has approached this type of assault is discussed in some detail below. Before beginning this discussion, however, it is important to point out that, although the preceding discussion has outlined three primary means by which sexual assault is achieved as the first level of a typology of assault types, we recognize that in actuality a single assault could be achieved by more than one means. For example, a woman who is extremely drunk (incapacitated) could be forcibly held down and raped—in which case the assault could be classified as both physically forced and incapacitated rape.

1.1.1 Incapacitated Sexual Assault

The general relationship between substance use and sexual assault has been well documented, especially with respect to research focusing on university samples (Mohler-Kuo, Dowdall, Koss, & Wechsler, 2004; Tyler, Hoyt, & Whitbeck, 1998; Koss & Dinero, 1989; Koss, Gidycz, & Wisniewski, 1987; Muehlenhard & Ma, 1987). Substance use can incapacitate a victim or make it difficult for her to consent to or refuse sexual activity. It may also decrease a perpetrator's sense of responsibility or awareness of his behavior, lead to the misinterpretation of cues, diminish the victim's ability to prevent an assault, or lead to women taking risks they might otherwise avoid (Testa, Livingston, & Collins, 2000; Abbey, Ross, & McDuffie, 1994; Abbey, 1991).

Numerous studies have addressed the relationship between substance use and sexual assault by considering substance use as a contextual factor associated with sexual assault. For example, several studies have reported that over half of the victims and perpetrators of sexual assault among college students had been drinking alcohol prior to the assault (Hindmarch & Brinkmann, 1994; Koss & Dinero, 1989; Muehlenhard & Ma, 1987). In their national study of college women, Koss (1988) found that 55% of rape victims and 74% of rape perpetrators had been drinking alcohol. In the National College Women Sexual Victimization (NCWSV) study, 43% of the sexual victimization incidents involved alcohol consumption by victims and 69% involved alcohol consumption by the perpetrator (Fisher, Daigle, Cullen, & Turner, 2003). Other estimates of drug and/or alcohol use based on victims' reports suggest that 20% of victims and 63% of perpetrators were drinking or using drugs prior to the assault (Ulman & Breklin, 2000).

These findings clearly demonstrate that a strong relationship exists between substance use and sexual assault. However, they do not identify sexual assault incidents that occurred because of victim incapacitation. Many students drink without becoming incapacitated, and it would be inappropriate to assume that any incidents in which the victim was drinking could be classified as incapacitated sexual assaults. Findings illustrating that large proportions of victims and perpetrators engage in substance use simply help document

substance use as a potential risk factor for both victimization and perpetration of sexual assault.

Part of the reason that incapacitated sexual assault has been approached inconsistently by previous researchers is lack of agreement on whether this type of sexual assault ought to be restricted to incidents in which the perpetrator was responsible for the victim's incapacitation. Some studies have been designed to only "count" as incapacitated assaults those in which the perpetrator was responsible for the victim's incapacitation. For example, in the original Sexual Experiences Survey (SES - Koss, Gidycz, & Wisniewski, 1997), respondents were asked "Have you had sexual intercourse when you didn't want to because a man made you intoxicated by giving you alcohol or drugs?" Based on this measure, 45% of the rape incidents experienced by women in Koss et al.'s national study of college women were reported to have occurred subsequent to the intentional administration of alcohol and/or drugs (Koss, Gidycz, & Wisniewski, 1987). Because of the increasing media attention and anecdotal reports of drugs being administered clandestinely to immobilize victims, impair memory, and facilitate rape, some researchers attempted to further distinguish incapacitated sexual assault in which the perpetrator was responsible for the victim's incapacitation in a manner that was unknown to her. For example, Testa, Livingston, and Vanzile-Tamsen (2003) modified the SES item on assailant-administered alcohol or drugs by adding "without your knowledge" to the end of the item. This type of incapacitated sexual assault involves coercion on the part of the perpetrator and is often known as drug-facilitated sexual assault (DFSA).

In the CSA Study, we consider as incapacitated sexual assault any unwanted sexual contact occurring when a victim is unable to provide consent or stop what is happening because she is passed out, drugged, drunk, incapacitated, or asleep, regardless of whether the perpetrator was responsible for her substance use or whether substances were administered without her knowledge. This is consistent with the work of Testa et al., who, focusing exclusively on rape, considered incapacitated rape to include unwanted sexual intercourse when the victim was incapacitated because of alcohol or drugs, regardless of whether the substance(s) had been consumed voluntarily or not (Testa, Livingston, & Vanzile-Tamsen, 2003).

However, in the CSA Study, we further break down incapacitated sexual assault into four subtypes. The first two subtypes pertain to sexual assaults achieved when the victim is given—without her knowledge or consent—a substance that physically incapacitates her and makes her incapable of providing consent. *DFSA* (drug-facilitated sexual assault) is defined as unwanted sexual contact occurring when the victim is incapacitated and unable to provide consent after she had been given a drug without her knowledge or consent. Incidents classified as DFSA are those in which the victim is *certain* that she had been drugged. In contrast, *SDFSA* (suspected drug-facilitated sexual assault) is defined as incapacitated sexual assault occurring after the victim *suspects* that she had been given a

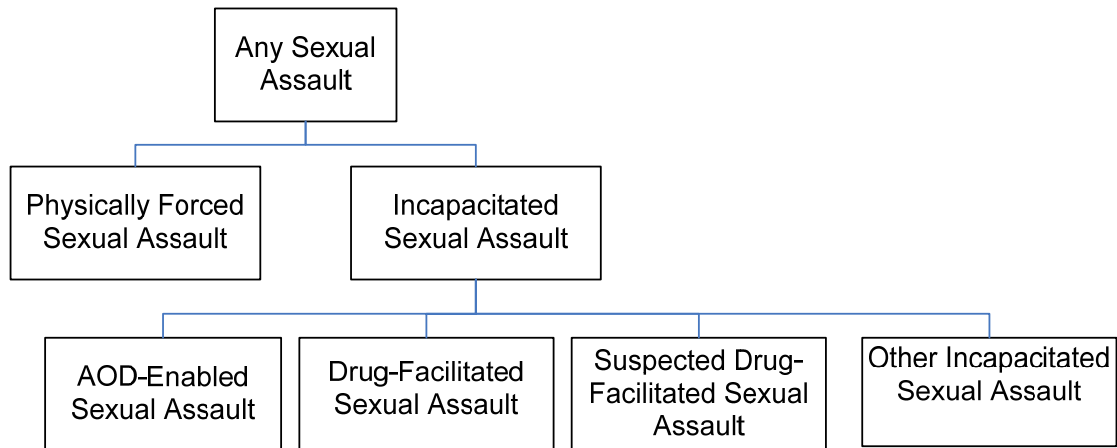
drug without her knowledge or consent. Our conceptualization of DFSA is consistent with other definitions (for example, the American Prosecutors Research Institute [1999] defines DFSA as sexual assault facilitated by the administration of “anesthesia-type” drugs, which physically incapacitate the victim and make her incapable of giving or withholding consent); however, we do not restrict the categorization to “anesthesia-type” drugs only. Although drugs commonly reported in association with DFSA include Rohypnol (flunitrazepam), gamma hydroxybutyrate (GHB), Ketamine (a general anesthetic), MDMA (ecstasy), and Soma (carisoprodol) (LeBeau et al., 1999; U.S. Department of Justice, 2003), any drug can be administered without the victim’s knowledge.²

The third type of incapacitated sexual assault considered in the CSA Study is termed *alcohol and/or other drug- (AOD-) enabled sexual assault*. We recognize that most women who drink or use drugs do so voluntarily and that the vast majority of situations in which a woman is incapacitated because of the effects of alcohol or drugs are not caused by coercive or clandestine action on the part of another individual. However, if a woman experiences unwanted sexual contact when she is incapacitated and unable to provide consent because of voluntary consumption of alcohol or other drugs, a sexual assault has nonetheless occurred. We consider the assault to be directly enabled by the use of alcohol or other drugs. Although it is important to distinguish between DFSA and sexual assault occurring after voluntary substance abuse, we believe that both are clear instances of incapacitated sexual assault and classify them accordingly.

To distinguish between incapacitation due to the effects of AOD (administered either coercively or voluntarily) and other types of incapacitation, we include a fourth type of incapacitated sexual assault in our typology. *Other incapacitated sexual assaults* capture the remaining, and likely uncommon, situations in which a victim can be incapacitated, such as by being asleep or unconscious. The basic components of this typology of sexual assault are presented in Exhibit 1-1.

²Even alcohol could be administered without the victim’s knowledge. For example, a victim could be told that a drink contains no alcohol.

Exhibit 1-1. Basic Sexual Assault Typology



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2. BACKGROUND

This section summarizes previous research on the prevalence of sexual assault among university women, including risk factors for sexual assault among university women, the context in which campus sexual assault occurs, consequences of sexual assault, and the reporting of sexual assault. Previous literature on prevalence, risk factors, consequences, and reporting are presented within the context of the typology presented above wherever possible. Finally, we include a brief summary of the research conducted on sexual assault perpetration by university men, focusing on prevalence estimates and risk factors for perpetration.

2.1 Prevalence Estimates for Sexual Assault Victimization

In 2002, the National Crime Victimization Survey (NCVS) identified 247,730 incidents of rape or sexual assault, with the highest rates reported among 16- to 19-year-old (10.4 per 1,000) and 20- to 24-year-old women (5.4 per 1,000) (DOJ, BJS Web site, 2004). Although methodological variation makes comparisons difficult, some previous studies suggest that university women are at greater risk than women of a comparable age in the general population (Fisher, Cullen, & Turner, 2000; DeKeseredy & Kelly, 1993; Koss, Gidycz, & Wisniewski, 1987), probably because of the close daily interaction between men and women in a range of social situations experienced in university settings (Fisher, Sloan, Cullen, & Lu, 1988). Using items similar to the NCVS, the NCWSV study—a telephone survey with a national sample of 4,446 college women—found that 2.8% of college women had experienced a completed and/or attempted rape during the current academic year³ and estimated that between 20% and 25% of women will experience a completed and/or attempted rape during their college career (Fisher, Cullen, & Turner, 2000). A prior study of a national sample of more than 6,000 students enrolled in 32 colleges and universities reported that 27% of the women had experienced attempted (12%) or completed (15%) rape in their lifetime (Koss, Gidycz, & Wisniewski, 1987).

In addition to generating estimates of attempted and/or completed rape, much of the existing research has also explored the prevalence of sexual victimization at a general level. For example, in the NCWSV, 15.5% of college women reported being sexually victimized during the academic year in which the data were collected (Fisher, Cullen, & Turner, 2000). Koss (1988) found that 44% of the college women in her sample reported some type of sexual victimization within a 1-year period. A single-site, longitudinal study of 100 college women found that 29% of the sample reported being sexually victimized (including sexual contact, sexual coercion, attempted rape, or rape) by a dating partner in the 32 months since entering college (Himelein, 1995). The prevalence of lifetime sexual victimization by a

³However, because the survey was conducted from February to May 1997, the average time period about which study participants responded was only 7 months.

dating partner was 52%, with 38% having been sexually victimized in dating situations prior to entering college (Himelein, 1995).

With respect to the prevalence of the distinct types of sexual assault introduced previously (physically forced and incapacitated sexual assault, with incapacitated assault further classified as DFSA, AOD enabled, and other incapacitated sexual assault), studies conducted with university women have shown that incidents achieved by using physical force are less common than those not involving physical force (Fisher, Cullen, & Turner, 2000). Few previous studies have examined incapacitated sexual assault using a definition similar to the one employed in the CSA Study. However, the Harvard School of Public Health College Alcohol Study (CAS) specifically asked about sexual intercourse when the victim was so intoxicated that she was unable to provide consent. In 2001, the prevalence of this type of rape was 3.2% and accounted for 72% of all rapes (Mohler-Kuo, Dowdall, Koss, & Wechsler, 2004). Although the current review focuses primarily on sexual assault experienced by university women, a community-based study conducted by Testa et al. is relevant due to its distinction between forcible rape and incapacitated rape. Among a community-based sample of women aged 18 to 30, 9.4% reported experiencing nonconsensual sexual intercourse since the age of 14 when incapacitated (Testa, Livingston, Vanzile-Tamsen, & Frone, 2003). This classification includes women who reported they were incapacitated because of their use of alcohol or drugs and were not able to prevent unwanted sexual intercourse from taking place (8.4%), as well as women who reported having sexual intercourse when they did not want to because a man made them intoxicated by giving them alcohol or drugs without their knowledge (3.1%). Interestingly, the prevalence of incapacitated rape (9.4%) was roughly equivalent to the prevalence of forcible rape (10.7%). However, in this study, incapacitated rape was limited to situations in which the victim was passed out or unaware of what was happening. An expanded definition of incapacitation (such as the one employed in the CSA Study) would likely have generated a substantially higher prevalence estimate for incapacitated rape.

Although research such as the Testa et al. (2003) study indicates that the prevalence of DFSA is very low (in their study, 3.1% of the sample reported having unwanted sexual intercourse because they were given a substance without their knowledge), it is extremely difficult to confirm the true prevalence of DFSA, primarily because victims may not know with certainty that they were administered a substance or whether they were sexually assaulted. "Date rape drugs," if they are administered, have properties that make them particularly difficult to detect. Most are colorless and odorless, and can rapidly (i.e., within 20 minutes for Rohypnol, GHB, and Ketamine) induce sleep or sedation and an inability to recollect events (anterograde amnesia); these depressive effects are magnified when used with alcohol (LeBeau et al., 1999). In addition, detection is difficult because the drugs have a short half-life (e.g., GHB can only be detected within 12 hours of ingestion, and the psychomotor impairments it causes last a few hours [Smith, 1999]), and some of these

substances (e.g., Ketamine) cannot be detected or may be extremely difficult to detect because of limitations in existing testing methods (Pope & Shouldice, 2001).

These methodological challenges make it extremely difficult to generate prevalence estimates of DFSA. Several forensic toxicology laboratories have developed estimates, but these figures are of limited utility because they are based solely on cases in which a potential victim has come forward, DFSA is suspected, and analyses have been conducted to confirm DFSA. For example, Slaughter (2000) reported that 61% of urine specimens from rape victims suspected by a rape treatment center examiner of containing drugs were found to contain alcohol and/or drugs, with alcohol present in 63% of the positive samples, marijuana present in 30%, and GHB and Rohypnol in less than 3%. Similarly, ElSohly and Salamone (1999) reported that 60% of urine samples submitted by law enforcement agencies, emergency rooms, and rape crisis centers (and provided by individuals claiming to have been sexually assaulted when drug use was suspected) were positive for drugs (41% tested positive for alcohol, 18.5% for marijuana, 8.2% for benzodiazepines, 8.2% for cocaine, 4.3% for amphetamine, 4.1% for GHB, 2.1% for opiates, 2.1% for propoxyphene, and 1% for barbiturates). These estimates are difficult to interpret, however, because they are based on data collected from victims who (1) suspected they were drugged, (2) reported the incident to a medical center or law enforcement agency, and (3) reported their victimization soon enough after the incident for authorities to make the decision to take a sample and test for measurable traces of a substance (i.e., within 48 to 72 hours of ingestion). It is virtually impossible to use these “confirmation” studies to calculate DFSA prevalence because limited data exist on the proportion of sexual assault victims who suspect they were victims of DFSA following “unknown” or nonconsensual ingestion. McGregor et al. (2003) reported that 12% of cases presenting at a hospital-based emergency service over a 7-year period were identified as suspected DFSA (based either on the victim’s own suspicion or the examiner’s opinion). Similarly, a recent Australian study found that of 434 adult sexual assault cases over a 12-month period, DFSA was suspected in 17.5% ($n = 76$) of these cases, although “covert” administration was suspected in only 22 cases (and confirmed through toxicological evidence in only 15 cases) (Hurley, Parker, & Wells, 2006).

2.2 The Context of Campus Sexual Assault

In the vast majority of sexual assaults experienced by university women, the perpetrator and victim know each other in some way. In the National Survey of College Women, 93% of sexual assault victims reported that they knew the perpetrator (Ullman, Karabatsos, & Koss, 1999). Similarly, the NCWSV study revealed that among the college women who experienced completed and/or attempted rape, the perpetrator (most commonly a classmate, friend, boyfriend or ex-boyfriend, or acquaintance) was known to the victim in nearly 90% of cases (Fisher, Cullen, & Turner, 2000). Interestingly, it has been suggested

that in sexual assaults involving substance use, the perpetrator and victim are *less* likely to be intimately acquainted than sexual assaults in which substance use is not involved (Abbey et al., 1996; Koss et al., 1988; Ullman & Brecklin, 2000).

In the NCWSV, victims were on a date with the perpetrator in 12.8% of completed rapes and 35% of attempted rapes (Fisher, Cullen, & Turner, 2000). In the National College Women's Study, nearly 40% of women experiencing sexual victimization were on a date with the perpetrator (Ullman, Karabatsos, & Koss, 1999). The NCWSV study also showed that respondents reported that the perpetrator was of the same race as the victim in nearly 80% of the incidents (Fisher, Daigle, Cullen, & Turner, 2003).

The NCWSV study identified several other contextual factors associated with sexual assault. Just over half of the completed rapes took place after midnight (with 36.5% occurring between 6 p.m. and midnight and only 12.8% occurring between 6 a.m. and 6 p.m.) and most took place in living quarters. For all types of sexual victimizations, it was more common for students to be victimized off campus (66% of completed rapes occurred off campus) than on campus⁴ (Fisher, Cullen, & Turner, 2000).

In the NCWSV, the majority of victims reported employing some type of protective action—typically using physical force against the perpetrator. However, victims of attempted rape were more likely to take protective action (particularly using physical force) than victims of completed rape, which may suggest the effectiveness of such action at preventing the attempt from being successful (Fisher, Cullen, & Turner, 2000). The National College Women's Study also reported high levels of victim resistance (91%), yet the relationship between degree of victim resistance and the outcome of the assault was the opposite of that observed in the NCWSV; women who resisted more during the assault (with resistance measured on a scale ranging from less forceful verbal resistance to more forceful physical resistance) reported greater severity of sexual victimization (with completed rape being the highest severity outcome). This pattern was more pronounced for victims who had not been drinking prior to the assault than for those who had been drinking (Ullman, Karabatsos, & Koss, 1999).

In the National College Women's Study, the assailant had a weapon in only 1.9% of sexual victimizations (Ullman, Karabatsos, & Koss, 1999). With respect to victim injury, NCWSV data show that the victim reported experiencing an injury in about 20% of the completed and/or attempted rape incidents, with the most common injury reported being "bruises, black-eye, cuts, scratches, swelling, or chipped teeth" (Fisher, Cullen, & Turner, 2000). Fewer respondents reported injuries from the other types of sexual victimization. Some

⁴The pattern of living on campus being a risk factor and most assaults occurring off campus is slightly counterintuitive; however, students who live on campus clearly participate in social activities off campus. In addition, living on campus may be a proxy for year of study, given that other studies have found sexual assault more common among freshmen and sophomores (Meilman & Haygood-Jackson, 1996).

studies have observed that victim injury is more likely when perpetrators had been using alcohol or other drugs prior to the incident (Coker et al., 1988; Martin & Bachman, 1998; Ullman & Brecklin, 2000) but others have not (Brecklin & Ullman, 2001, 2002). Testa, Vanzile-Tamsen, and Livingston (2004) found that the relationship between perpetrator intoxication and increased likelihood of victim injury was specific to incidents in which the victim was sober. This interaction effect may be explained by either the possibility that sober women may resist more strongly, which may increase their chances of injury (although ultimately may reduce the severity of the sexual assault), or that perpetrators resort to force when the victim is not more vulnerable or susceptible as a result of intoxication (Testa, Vanzile-Tamsen, & Livingston, 2004). In one of the few studies to consider physically forced rape and incapacitated rape as distinct types of rape, Testa, Livingston, Vanzile-Tamsen, and Frone (2003) found that injury as a result of rape was significantly less likely to occur in incapacitated rape than forcible rape. Specifically, in their community-based sample of 18- to 30-year-old women, 33% of victims of incapacitated rape were injured during the assault compared with 57% of victims of forcible rape.

2.3 Risk Factors Associated with Sexual Assault

Given the high prevalence of sexual assault experienced by university women, much of the previous research has attempted to identify risk factors for sexual assault. It is important to note that such efforts should not be construed as victim-blaming or as attempts to attribute responsibility for the incident to the victim. It is extremely important for the purposes of better targeting prevention programming to know as much as possible about factors that place certain individuals at greater risk for victimization.

2.3.1 Prior Victimization

One of the strongest predictors of sexual assault is prior victimization. In the NCWSV, 10% of the sample reported being raped prior to the start of the academic year in which the study was conducted; 11% reported a prior attempted rape (Fisher, Cullen, & Turner, 2000). Women who had experienced a prior sexual assault were shown to have an increased risk of sexual victimization during the current academic year (Fisher, Cullen, & Turner, 2000). Adolescents who experienced a completed or attempted rape are twice as likely to experience a subsequent sexual assault during their college years (Hanson & Gidycz, 1993). Himelein's (1995) longitudinal study of college women found that women who had experienced sexual victimization by a dating partner prior to entering college were significantly more likely to be victimized during college, with prior victimization being the strongest predictor of victimization during college. In Himelein's study, although precollege victimization by a dating partner strongly predicted victimization during college, childhood sexual abuse did not. In Gidycz, Hanson, and Layman's (1995) longitudinal study, women who had been victimized during the first time period of the study were three time more likely than nonvictims to be revictimized during the second observation period.

Several factors may mediate the relationship between previous and subsequent sexual assault including low self-esteem, depression, and poor psychological adjustment, all of which may increase vulnerability for revictimization. For example, Himelein suggested that “a tendency to internalize blame suggests that victimization would exacerbate existing self-doubts, making future attempts at assertion in sexual situations more difficult” (1995, p. 44). Another explanation posited for the greater risk of revictimization among adolescents and young adults who have been sexually abused is that sexual and physical abuse contribute to the use of alcohol and other drugs, which can in turn place a previous victim at risk for future victimization (Watts & Willis, 1993; Dembo, Williams, Wothke et al., 1992). Researchers have, in fact, documented that heavy drinking may be a means of coping with the psychological distress following sexual assault (Grayson & Nolen-Hoeksema, 2005; Miranda, Meyerson, Long, Marx, & Simpson, 2002). Several studies among college students have identified increased alcohol consumption and a greater number of drinking-related negative consequences in sexual assault victims compared with nonvictims, using both cross-sectional (Corbin, Bernat, Calhoun, McNair, & Seals, 2001; Larimer, Lydum, Anderson, & Turner, 1999; Marx, Nichols-Anderson, Messman-Moore, Miranda, & Porter, 2000; Koss & Dinero, 1989) and longitudinal (Kaysen, Neighbors, Martell, Fossos, and Larimer, in press; Gidycz, Hanson, & Layman, 1995; Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997) designs.

2.3.2 Substance Use

Regardless of prior victimization status, alcohol consumption by the victim is a major risk factor for sexual assault. In the NCWSV, women who frequently drank enough to get drunk were at greater risk of sexual victimization than those who did not (Fisher, Cullen, & Turner, 2000). Mohler-Kuo et al. (2004) found that heavy episodic drinking was the strongest predictor of both rape when intoxicated and other types of rape (physically forced rape and rape due to threats of force); high school heavy episodic drinking patterns were also significantly associated with the risk of rape while in college. The Harvard College Alcohol Study also found that drug use was associated with an increased risk of rape (including rape when intoxicated and other types) (Mohler-Kuo, Dowdall, Koss, & Wechsler, 2004). Similarly, Greene and Navarro (1998) showed that heavy alcohol use predicted later sexual assault over the course of an academic year among college women. Interestingly, the severity of the outcome also appears to be affected by alcohol and/or drug use by the victim and perpetrator. In the National College Women’s Study, victims who reported getting drunk more often also reported more severe sexual victimization than victims who got drunk less often (Ullman, Karabatsos, & Koss, 1999). Studies examining incapacitated sexual assault have found that early age of onset of drinking and frequency of alcohol consumption are associated with greater risk of incapacitated sexual assault and penetration (Testa, Livingston, & Leonard, 2003; Tyler, Hoyt, & Whitbeck, 1998).

2.3.3 Age and Year of Study

Freshmen and sophomore women appear to be at greater risk of being victims of sexual assault than are upperclassmen. A recent study employing a convenience sample of university women found that 84% of the women who reported sexually coercive experiences experienced the incident during their first four semesters on campus (Gross, Winslett, Roberts, & Gohm, 2006). Age itself may be a related risk factor. In the CAS, underage women were more likely to report being raped (including rape when intoxicated) than women 21 or older (Mohler-Kuo, Dowdall, Koss, & Wechsler, 2004).

2.3.4 Race/Ethnicity

The role of race/ethnicity as a risk factor for campus sexual assault or rape has not been well studied, primarily because of the small number of minorities included in previous research. In Koss et al.'s (1987) National College Women Survey, Native American college women reported the highest incidence of rape, and white women had higher rates than African American, Hispanic, and Asian women. However, the role of race/ethnicity as a risk factor for sexual assault may differ depending on the type of assault. For example, the Harvard College Alcohol Study found that white undergraduate females were more likely to report experiencing rape when intoxicated than women of other races⁵ (Mohler-Kuo et al., 2004), which is likely due to the pattern of heavy alcohol use being more common among white college students (Wechsler et al., 1994, 2000, 2000; Caetano et al., 1998). In the same study, white women were *less* likely to report experiencing other types of rape (which included physically forced rape and threats of force) than women of other races (Mohler-Kuo et al., 2004). Similarly, in a study conducted in a single Southeastern university, Gross, Winslett, Roberts, and Gohm (2006) found significantly higher rates of physically forced sexual intercourse (and emotional coercion) for African American women compared with white women.

2.3.5 Residential Status

The Harvard College Alcohol Study found that students who resided in sorority houses and on-campus dormitories were more likely to report experiencing rape than students residing off campus (Mohler-Kuo et al., 2004). In the NCWSV, women who resided on campus had an increased risk for sexual victimization occurring on campus (Fisher, Cullen, & Turner, 2000).

2.3.6 Sorority Membership

Sorority membership itself has been identified as a risk factor for sexual assault, including being a victim of alcohol or drug coercion (Tyler, Hoyt, & Whitbeck, 1998; Mohler-Kuo et al., 2004; Copenhaver & Grauerholz, 1991; Kalof, 1993). This finding is probably due to the

⁵Although approximately 25% of the CAS sample was nonwhite, the breakdown of nonwhite students into specific racial/ethnic categories was not reported in the article.

pattern of sorority women being more likely to drink (Tyler, Hoyt, & Whitbeck, 1998) and to associate with fraternity men, who have been identified as being more likely to perpetrate sexual assault or sexual aggression than nonfraternity men (Tyler, Hoyt, & Whitbeck, 1998; Lackie & deMan, 1997). Not surprisingly, previous research has documented that students who are members of Greek organizations drink more frequently and heavily than nonmembers (Kilmer et al., 1999; Cashin, Presley, & Meilman, 1988), and it is questionable whether Greek affiliation is associated with sexual assault once alcohol consumption is controlled for analytically.

2.3.7 Dating Violence History

Although less well researched than many of the other factors discussed in this section, dating violence may be a risk factor for sexual assault. The American College Health Association-National College Health Assessment (NCHA) study found that women who were physically abused by a dating partner in any year were more likely to be sexually assaulted that year (American College Health Association, 2004).

2.3.8 Consensual Sexual Experiences

Engaging in consensual sexual activity is a risk factor for sexual assault (Tyler, Hoyt, & Whitbeck, 1998). A positive association between sexual assault and both the number of sexual partners and an earlier age of initiation of sexual activity has been identified (Gidycz, Hanson, & Layman, 1995; Koss & Dinero, 1989).

2.3.9 Attitudinal Characteristics

The role of victim attitudinal characteristics as a risk factor for sexual victimization has also been explored by previous studies, with very few significant relationships identified. For example, Koss and Dinero (1989) compared victims and nonvictims on rape-supportive beliefs and did not find major differences. A study conducted among a convenience sample of precollege women also did not find differences in rape-supportive belief scales or sexual conservatism between victims and nonvictims but found only a minimal association between acceptance of interpersonal violence and victimization (Vogel & Himelein, 1995). Adversarial sexual beliefs were significantly higher among victims in the Vogel and Himelein (1995) study, and in another cross-sectional study, university women with sexually permissive attitudes were at higher risk for several types of sexual coercive strategies (Tyler, Hoyt, & Whitbeck, 1998).

However, it is widely acknowledged that unless these relationships are examined longitudinally, attitudes can be viewed as either a precursor to, or consequence of, sexual victimization. In a longitudinal study involving 100 women followed for 32 months, Himelein found that sexual conservatism (which encompasses traditional, restrictive beliefs about sexual behaviors) was negatively associated with college sexual victimization; women who entered college with more sexually conservative attitudes were less likely to be sexually

victimized during college. The other attitudinal measures examined, including adversarial sexual beliefs, acceptance of interpersonal violence, and rape myth acceptance, did not significantly predict the likelihood of college sexual victimization (Himelein, 1995).

2.4 Reporting of Sexual Assault

Among the general population, approximately half of the rapes/sexual assaults reported in the 2002 NCVS were reported to the police (BJS, 2003). Because date and acquaintance rapes are less likely to be reported than stranger rapes (Lott, Reilly, & Froward, 1982), the likelihood of reporting sexual assault is lower on college campuses. In the NCWSV study, completed and/or attempted rapes were reported to law enforcement officials in less than 5% of cases (Fisher, Daigle, Cullen, & Turner, 2003).

Several barriers to reporting were identified by victims: (1) not having proof that the incident occurred, (2) fear of retaliation by the perpetrator, (3) fear of hostile treatment by the authorities, (4) uncertainty that the authorities would consider the incident serious enough, (5) not knowing how to report the incident, and (6) desire to prevent family and others from learning about it (Fisher, Cullen, & Turner, 2000). Among victims included in the NCWSV, the most frequently cited reason for not reporting incidents to the police was because victims believed the event would not be considered serious enough by authorities. In 42.1% of the incidents, victims did not report the incident because they were not sure a crime or harm was attended, and in 30% of the incidents, victims believed the police would not think the incident was serious enough (Fisher, Daigle, Cullen, & Turner, 2003). For rape victims in particular, a commonly cited reason for not reporting the incident to any police agencies is not wanting family members and others to know about the victimization (38.9% of rape victims in the NCWSV cited this as a reason for failing to report the event).

From the perspective of campus administrators, some policies may discourage victims from reporting, such as campus policies on drug and alcohol use (victims who had been drinking may be concerned about reprisal for violating such policies) and policies requiring victims to participate in adjudication (Karjane, Fisher, & Cullen, 2005). Factors that encourage reporting (according to administrators) include victim services, written law enforcement response protocols, coordination between campus and community, new student orientations, campus-wide publicity about past crimes, having sexual assault peer educators, and policies allowing confidential and anonymous reporting (Karjane, Fisher, & Cullen, 2005). Although 84% of the institutions studied offered confidential reporting, less than half (46%) offered anonymous reporting (Karjane, Fisher, & Cullen, 2005).

Reluctance to report sexual assault may also be related to the victim's perceptions of the event. The NCWSV study found that, of the college women who experienced unwanted

completed penetration⁶ by force or the threat of force, only 46.5% of the victims reported that they considered the incident to be a rape (Fisher, Cullen, & Turner, 2000). In Koss et al.'s (1988) study, only 27% of the women who reported experiencing an assault that met the legal definition of rape the researchers use considered the incident to be rape. Students are particularly unlikely to label the incident as "rape" when no weapon is used, no sign of physical injury is evident, and alcohol is involved (Fisher, Cullen, & Turner, 2000). Victims may not define the event as sexual assault or report the incident because they are embarrassed, are reluctant to consider someone they know as a rapist, or do not understand the legal definition of sexual assault (Pitts & Schwartz, 1993). Victimization characteristics have indeed been associated with the likelihood of reporting sexual victimization. In the NCWSV, the severity of the incident (i.e., use of weapons, victim definition of the incident as rape) as associated with greater likelihood of reporting. In addition, threats of sexual victimization and rapes were more likely to be reported than sexual contact and sexual coercion (Fisher, Daigle, Cullen, & Turner, 2003).

Characteristics of the offender and victim have also been shown to influence the likelihood of reporting among university women. Incidents most likely to be reported to law enforcement are those in which the offender was a stranger and in which the victim and offender did not share the same race/ethnicity (Fisher, Daigle, Cullen, & Turner, 2003). Regarding victim characteristics, African American victims were more likely to report incidents than students of other races/ethnicities (Fisher, Daigle, Cullen, & Turner, 2003).

Several contextual characteristics are associated with the likelihood of reporting. For example, incidents occurring on campus were more likely to be reported to law enforcement (specifically, campus police) than off-campus incidents in the NCWSV (Fisher, Daigle, Cullen, & Turner, 2003).

A major contextual factor that influences the likelihood of reporting is the role of alcohol and drugs. In the NCWSV, incidents in which both offenders and victims were drinking or had taken drugs were less likely to be reported to campus authorities (Fisher, Daigle, Cullen, & Turner, 2003). Although we are aware of no previous studies that have examined reporting for incapacitated sexual assault or subtypes such as DFSA, one would expect even lower reporting of DFSA because of the possibility that the victim has trouble recalling specific events or may know that the drug may be undetectable soon after ingestion (Ledray, 2000; Riveira & Hart, 2000).

Sexual assault victims in general, however, are likely to tell someone they know about their victimization experiences. The NCWSV found that victims told someone other than the police (most often friends) about their victimization in approximately 70% of the incidents (Fisher, Daigle, Cullen, & Turner, 2003)

⁶Penetration included "penile-vaginal, mouth on your genitals, mouth on someone else's genitals, penile-anal, digital-vaginal, digital-anal, object-vaginal, and object-anal."

2.5 Perpetration of Campus Sexual Assault

A few studies have attempted to seek further understanding of the issue of campus sexual assault by collecting reports of sexual coercion and sexual assault perpetration among college men. For example, Koss, Gidycz, and Wisniewski (1987) found that nearly 20% of college-aged males reported obtaining some type of sexual contact through coercion, with 1% reporting perpetration of oral or anal penetration through the use of physical force. Based on a small convenience sample of university men, Tyler, Hoyt, and Whitbeck (1998) found that 3% of male respondents reported using physical force to obtain sexual intercourse and 23% used alcohol or drugs to obtain sexual intercourse—prevalence rates that were surprisingly similar to the victimization rates reported by the women in their sample.

Several studies have identified risk factors for perpetration, based on both victim accounts of the sexual assault and self-reported information from men. Not surprisingly, a risk factor for perpetration of sexual assault is substance use. Men who reported heavy drinking are more likely than other men to report having committed sexual assault (Abbey et al., 1994; Koss & Dinero, 1988). In the National College Women's Study, in which 74% of rape perpetrators had been drinking alcohol prior to the assault, drinking prior to the assault by the perpetrator was also associated with the severity of the sexual victimization (Ullman, Karabatsos, & Koss, 1999).

As mentioned previously, fraternity men have been identified as being more likely to perpetrate sexual assault or sexual aggression than nonfraternity men (Tyler, Hoyt, & Whitbeck, 1998; Lackie & deMan, 1997). In addition, a recent study by Forbes, Adams-Curtis, Pakalka, and White (2006) found that college men who had participated in aggressive sports (including football, basketball, wrestling, and soccer) in high school used more sexual coercion (along with physical and psychological aggression) in their college dating relationships than men who had not. This group also scored higher on attitudinal measures thought to be associated with sexual coercion, such as sexism, acceptance of violence, hostility toward women, and rape myth acceptance (Forbes, Adams-Curtis, Pakalka, & White, 2006).

In the general population, sexual assault perpetrators have been identified as having higher levels of hostility toward women; lower levels of empathy; and being more likely to hold traditional gender role stereotypes, endorse statements used to justify rape, and hold adversarial beliefs about relationships between men and women (Seto & Barbaree, 1997). In addition, they are more likely to have experienced abuse or violence as a child, have engaged in adolescent delinquency, have peers who view forced sex as acceptable, and have had early and frequent dating and sexual experiences (Seto & Barbaree, 1997).

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3. RESEARCH METHODS

In recent years, incidents of drug facilitated sexual assault, in particular, have received considerable media attention; however, empirical information concerning these events is limited. The research that does exist suggests that university students are a group that may be at high risk of experiencing sexual assault, especially drug-facilitated assaults. It is therefore important to conduct methodologically sound research and collect valid data on sexual assault, including drug-facilitated sexual assault, in an effort to establish a firm foundation on which to develop effective preventive and therapeutic response strategies, as well as legal interventions.

The CSA Study involved conducting a Web-based survey of random samples of undergraduate students at two large public universities, one located in the South (University 1) and one located in the Midwest (University 2). Both universities are located in semi-urban areas. University 1 has a student body of approximately 30,000 students; University 2 has approximately 35,000 students. Approximately 10% of students at University 1 are African American and 3% are Hispanic. About 11% of students at University 2 are African American and 2% are Hispanic. Fifty-eight percent of students at University 1 are women and 55% of students at University 2 are women.

The CSA Survey was administered in the winter of 2005–2006, and a total of 5,446 undergraduate women and 1,375 undergraduate men participated. The CSA Study was reviewed and approved by RTI's Institutional Review Board (IRB), as well as the university IRBs. The remainder of this section of the final report presents information about the sampling and data collection methodology and the data analysis plan. Subsequent sections present descriptive data on the CSA survey respondents, the results of the CSA Study, and a discussion of the CSA Study conclusions, recommendations, and future research directions.

3.1 Data Collection

Two large public universities participated in the CSA Study. Both universities provided us with data files containing the following information on all undergraduate students who were enrolled in the fall of 2005: full name, gender, race/ethnicity, date of birth, year of study, grade point average, full-time/part-time status, e-mail address, and mailing address. In developing the sampling frame, we excluded students who were not enrolled full- or three-quarters time or who were over the age of 25 (because of concerns about not having sufficient statistical power to generate stable prevalence rates for the small number of students falling into these subgroups and the likelihood that these students, by having a longer duration of university attendance, would have an increased chance for exposure to sexual assault that is unrelated to their status as university students). Students under the age of 18 were also excluded to avoid having to obtain parental consent for the survey. The

total sampling frame from University 1 included 15,661 students (9,151 women and 6,510 men⁷), and the sampling frame from University 2 included 14,875 students (7,011 women and 7,864 men).

3.1.1 Sampling

We created four sampling subframes, with cases randomly ordered within each subframe: University 1 women, University 1 men, University 2 women, and University 2 men. We then slightly reduced the size of the subframes (using random sampling procedures) to obtain equal numbers of freshmen, sophomores, juniors, and seniors. The reduced sampling subframes at University 1 and University 2 contained 14,804 students (8,912 women and 5,892 men) and 11,960 students (6,324 women and 5,636 men), respectively—a total of 26,764 students across the four subframes at the two universities.

Samples were then drawn randomly from each of the four subframes. The sizes of these samples were dictated by response rate projections and sample size targets (4,000 women and 1,000 men, evenly distributed across the universities and years of study). For the female subsamples, 7,200 women were ultimately sampled from University 1 and 5,636 women were ultimately sampled from University 2 (see Exhibit 3-1).

3.1.2 Recruitment Procedures and Response Rates

To recruit the students who were sampled to participate in the CSA Study, we relied on both recruitment e-mails and hard copy recruitment letters that were mailed to potential respondents. Sampled students were sent an initial recruitment e-mail that described the study, provided each student with a unique CSA Study ID#, and included a hyperlink to the CSA Study Web site. During each of the following 2 weeks, students who had not completed the survey were sent a follow-up e-mail encouraging them to participate. The third week, nonrespondents were mailed a hard-copy recruitment letter. Two weeks after the hard-copy letters were mailed, nonrespondents were sent a final recruitment e-mail. The overall response rates for survey completion for the undergraduate women sampled at the two universities were 42.2% and 42.8%, respectively. The response rates for males were lower. Exhibit 3-1 depicts the response rates in relation to the sampling frames and subframes. Procedures for addressing response bias are discussed in more detail in the analysis section.

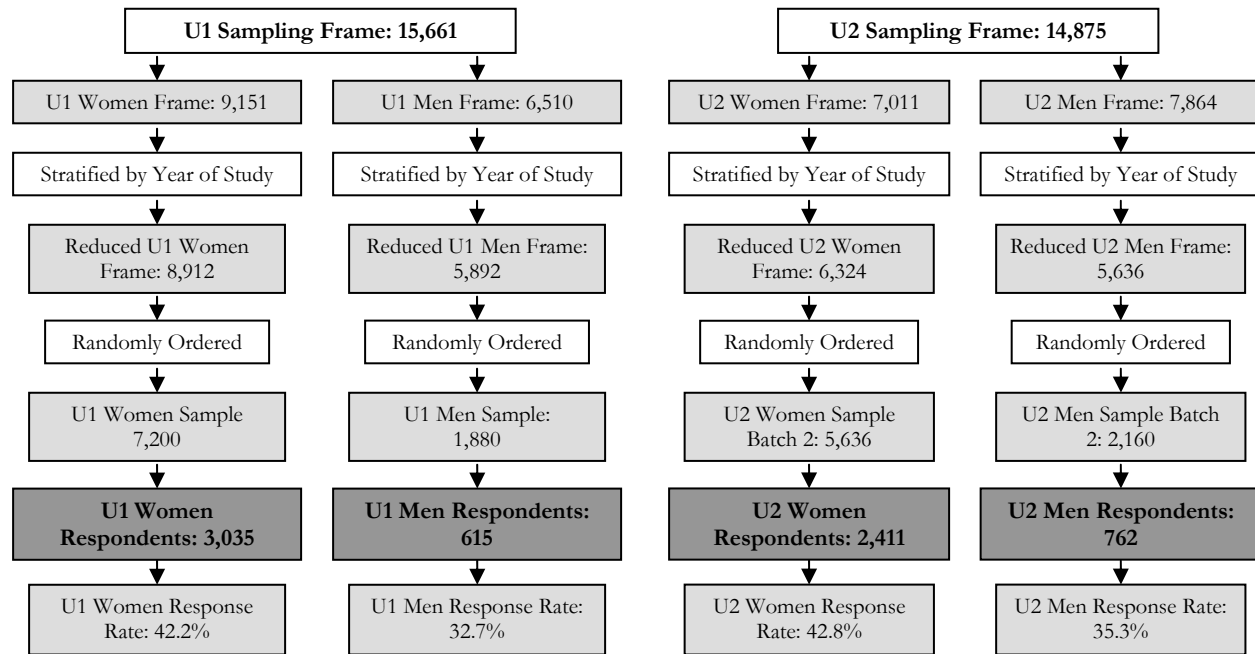
3.1.3 Web Site and Survey Design and Content

We reviewed the extant literature on survey design and specifically Web-based survey design and structured the CSA survey accordingly. For example, we kept the extent to which respondents had to scroll on a given Web page to a minimum, we made the font sufficiently large, and we used question structures that are familiar and straightforward to

⁷The inclusion of males was an exploratory component of the CSA Study, so many fewer male respondents were sampled.

college students. Although we would have liked to collect data on more topics or in more detail, we believed it was necessary to keep the survey instrument as concise as possible.

Exhibit 3-1. Diagram of Sampling Frames, Sampling Subframes, Samples, and Respondents



The survey instrument was programmed to accommodate a significant degree of customization based on responses to specific questions (e.g., gender-specific programming, skip patterns based on responses to “gate” questions, and fill patterns reflecting an individual’s responses to previous questions). The survey was designed to be completed in approximately 20 minutes, on average; however, large portions of the survey only applied to students who answered affirmatively to any of the sexual assault gate questions. Because of the voluntary nature of the survey, students were not forced to enter a response to each question prior to moving through the survey. However, for key survey questions, the instrument was programmed to display a message encouraging a response if the student did not answer the question before advancing to the next question.

The survey was divided into six modules. **Background Information** included survey items on demographics, school classification (year of study, year of enrollment, transfer status), residential characteristics, academic performance (GPA, ever failed a course), sports and social involvement (sports team membership, social organization membership, party attendance), attendance at functions where alcohol is served, and attitudes toward one’s university. **Alcohol and Other Drug Use** included items regarding frequency of alcohol and drug consumption (data on 13 different classes of drugs were obtained) since entering college, frequency of binge drinking and getting drunk, risk behaviors associated with

unknown drug ingestion (accepting a drink from someone unknown, leaving a drink unattended), experiences (suspected and/or known) with unknown drug ingestion (a series of questions were asked about both giving a drug to someone without their knowledge/consent and being given a drug without one's knowledge/consent), and availability of alcohol and other drugs. **Dating** included items on sexual orientation, frequency of dating, frequency of consensual sexual intercourse, AOD consumption prior to sexual intercourse, and dating violence (questions were asked about both victimization and perpetration of emotional and physical abuse).

The information on sexual assault victimization was included in the **Experiences** module, which was developed after extensive reviews of past surveys of sexual assault.⁸ This module included a series of gate questions for numerous types of nonconsensual sexual contact experienced by the victim. Distinct gate questions were asked for the following types of nonconsensual sexual contact, both before and since entering college: verbally coerced sexual contact (both completed and attempted incidents), physically forced sexual assault (both completed and attempted incidents), and sexual assault occurring when the respondent was incapacitated (respondents were asked about incidents they were certain happened and incidents they suspected happened). Detailed follow-up questions were asked of respondents who reported experiencing since they began college attempted and/or completed physically forced sexual assault and/or known and/or suspected sexual assault occurring when the respondent was incapacitated. The follow-up questions were asked separately for these two general types of sexual assault and included items on the number of incidents⁹; the specific type of assault(s) that occurred (forced touching of a sexual nature, oral sex, sexual intercourse, anal sex, and/or sexual penetration with a finger or object); the number of perpetrators; the relationship between the victim and the perpetrator(s); characteristics of the perpetrator(s); AOD use by the perpetrator(s); AOD use by the victim; the location of the incident(s); the timing of the incident(s); the use of weapons by the perpetrator(s); injuries sustained in the incident(s); disclosure about the incident(s) to family/friends, victim's crisis/health care centers, and law enforcement; timing of reporting to victim's crisis/health care centers and law enforcement; physical examinations/drug tests received; drug(s) tested positive for; satisfaction with reporting; reasons for not reporting the incident(s); other actions (both personal and academic) taken as a result of the incident(s); legal consequences experienced by the perpetrator; and whether the respondent considered the incident to be rape. Although the survey was

⁸Previous studies reviewed included, but were not limited to, the National College Women Survey (Koss et al. 1987), the College Alcohol Study (Mohler-Kuo et al., 2004), the National Violence Against Women Survey (Tjaden & Thoennes, 2000), and the National College Women Sexual Victimization Survey (Fisher et al. 2000).

⁹The "number of incidents" question was used to customize the wording for the remaining follow-up questions. For respondents who had reported experiencing more than one incident of the specific type of sexual assault, the follow-up questions primarily asked about "any of the incidents." This option was chosen over asking the victims to focus on a specific incident because we were primarily interested in the totality of each victim's experiences rather than characteristics of a single incident.

predominantly closed-ended, victims were also given the opportunity to write in (in a narrative fashion) any additional information about the incident(s) that they wanted to share. The **Experiences** section received by male respondents had the same level of detail and content, but it was tailored to be gender-appropriate.

For male respondents, a section that paralleled the “Experiences” module was then covered. This module, **Behaviors**, asked about the perpetration of the same types of sexual assault covered in the victimization module. Respondents who answered affirmatively to the gate questions were asked a set of follow-up questions about the number of victims, the specific type of assault(s) that occurred, relationship to the victim, AOD use by the perpetrator, AOD use by the victim, weapon use, injuries sustained, and whether the respondent considered the incident(s) to be rape.

The final module of the survey covered attitudes about sexual assault (respondents were given seven scenarios and asked to classify them as rape) and attitudes about the survey (the degree of honesty they employed when answering the survey questions). In addition, the final module of the survey included a question designed to enable an *aggregate-level* prevalence estimate of physically forced sexual assault to be generated among the study participants. Using an “item count” technique, survey respondents were randomly assigned to respond to one of two questions in which a list of adverse events is provided and the respondents simply report the number of the events they have experienced (without indicating which events they have experienced). One list included the key event (“Someone has had sexual contact with you by using physical force or threatening to physically harm you”) and the other did not, enabling a prevalence estimate to be generated simply by subtracting the average number of events experienced by the group whose list did not include the key event from the average number of events experienced by the group whose list did include the key event.

After the last survey question was answered, respondents were presented with an informational module on sexual assault and DFSA (as mentioned previously, a link to this informational module was also included on the home page of the survey). The informational module included sexual assault definitions, prevention advice, legal consequences of giving someone a drug without their knowledge or consent, and signs of drug ingestion. Also, on each page of the survey, we included a link to local, state, and national resources for sexual assault victims.

3.1.4 Incentive Redemption

The instrument was programmed to generate a “survey completion code” immediately after the respondent scrolled through the informational module. The students were then directed to a *separate* Web site (which opened up in a new window) to obtain their incentive for completing the survey. At this Web site, the students entered their “CSA Study ID#” and their “survey completion code.” The Web site was programmed to ensure that the ID and

the code were valid (and had not been previously used to obtain an incentive) prior to issuing a \$10 gift certificate code for Amazon.com and an iTunes song download. When an incentive was issued, the sample member was identified as having received an incentive, but no link between the identity of a sample member and their survey data was ever created. This incentive redemption strategy fulfilled three major objectives: (1) maintaining the anonymity of the survey data, (2) allowing us to track survey completion (so that we could follow up with noncompleters, generate response rate estimates, and compare the final respondents with the sampling frame), and (3) ensuring that each respondent could only receive one incentive and that only the students sampled for the survey would be able to receive the incentive.¹⁰

Because the survey was administered anonymously, we were not able to determine with certainty which students in the sampling frame participated in the CSA Study and which did not. The only way for us to determine with certainty which sampling frame members participated was if they redeemed the incentive we offered to students (an iTunes song download and a \$10 Amazon.com gift certificate), and not all students who participated in the CSA Study redeemed their incentives. In fact, about 84% of students who completed the CSA survey followed through to obtain their incentives. Similarly, the identities of sampling frame members were not attached to the survey data, so nonresponse bias analyses and data weighting procedures that we would typically employ in a study of this kind are not possible. Although this is a limitation of the CSA Study, we believe that maintaining anonymity and being able to credibly claim anonymity to potential survey participants was critical to the quality of the data and the success of the study, especially given the sensitive nature of the survey questions.

3.2 Data Handling

3.2.1 Data Preparation and Cleaning

Throughout the 3-month period in which the survey was administered, data were automatically saved to a data file on a secure network. Data were reviewed weekly to ensure that the survey instrument was working properly. Several minor problems were identified that preclude us from being able to use the data from some items, but these items were not critical to the purpose or the success of the CSA Study.

As with any survey data, some cleaning of the CSA data was required; however, the nature and extent of the cleaning that was necessary was limited. We have extant data on timing (i.e., how long it took each respondent to answer a particular question or complete the survey). We tested the survey instrument extensively and determined how quickly respondents could credibly move through the survey, as well as how long it might take

¹⁰However, we cannot rule out the (very unlikely) possibility that some individuals sampled for the survey provided their study identification number to a student not sampled for the survey.

students who were moving through the instrument slowly or who skipped into the detailed sections of the instrument, which would increase administration time. We were aware that some students might move through the survey as quickly as possible without reading the questions or response options or giving any thought to their answers in an effort to just obtain the incentives we were offering (i.e., an iTunes song download and a \$10 Amazon.com gift). We decided in advance of launching the survey that if respondents moved through the survey so quickly that they could not have credibly read some or most of the survey questions, we would discard their data. The range of survey administration times was 1.65 minutes to 102.67 minutes (mean = 12.32 minutes, standard deviation = 6.88 minutes). Our testing indicated that even the fastest of respondents could not credibly participate in the CSA Study in less than 6 minutes, a value that is a little less than 1 standard deviation below the mean, a threshold that is sometimes used to identify and discard outlying data. We, therefore, decided to discard data from respondents who moved through the survey in under 5.44 minutes, which is outside of 1 standard deviation from the mean and resulted in us discarding 148 student responses. Given the large number of respondents, discarding this many cases changed the results of the CSA Study very little, if at all.

Additional data cleaning simply involved recording data into more reasonable or preexisting categories. For example, on a number of survey items, we provided respondents with response options, but we also let them choose an “other” category and type in information that we received in the form of verbatim data. The race question is one in which this option was afforded to survey respondents, and although some of the verbatim data are difficult to recode into the preexisting categories (e.g., “American”), other answers could be easily recoded (e.g., “Chinese” into “Asian”). We recoded data whenever doing so was straightforward. In situations in which recoding was not straightforward, we usually simply left those responses in a catchall category like “other.”

3.2.2 Response Bias Analyses

Given the relatively low response rate achieved in the CSA Study, several strategies were employed to identify and adjust for the impact of nonresponse. Although some studies designed to capture sensitive information among university students have conducted intensive nonrespondent analyses and found no evidence that nonresponse affects the prevalence estimate (for example, in the Harvard School of Public Health College Alcohol Study, an association between student nonresponse and binge-drinking rates was not observed [Wechsler, Lee, Kuo, & Lee, 2000]), it is logical to surmise that students who did not participate in a survey about sexual assault may differ from those who did participate,¹¹

¹¹However, the reasons for nonresponse could affect prevalence estimates in opposing ways. Some nonrespondents (nonvictims) may have chosen not to participate because they felt that they had no relevant experience, whereas other respondents (victims) may have chosen not to participate because they anticipated that taking the survey might be upsetting to them.

which raises concerns about the accuracy of prevalence estimates generated from respondents.

The first step in addressing nonresponse was to conduct a unit nonresponse bias analysis, in which we compared respondents and nonrespondents on the administrative data elements provided by the universities. These data elements included age, university, race/ethnicity, and year of study. The results indicated that some bias existed, particularly in the race/ethnicity category. Nonwhite students (i.e., those identified as black, Hispanic, or other) were less likely to respond to the survey than their white counterparts. To reduce nonresponse bias and increase sample representativeness, weights adjusting for nonresponse were developed using a Generalized Exponential Model (Folsom & Singh, 2000). Cohen's effect size (CES) (Cohen, 1988, Section 7.2) was used as a measure of the magnitude of the bias, and we added weights for university, gender, year of study, and race/ethnicity, which reduced bias to negligible levels. For example, the CES for the race/ethnicity measure was 0.614 prior to weighting, which reflects a considerable amount of bias (Cohen, 1988). After weighting, the CES for race/ethnicity was reduced to 0.169, reflecting a small amount of bias. All prevalence estimates are based on weighted data; however, for ease of presentation, unweighted sample sizes are displayed in all text, tables and figures.

In an effort to learn more about the level and impact of nonresponse bias, we also examined the data using a "continuum of resistance" model (Groves & Wissoker, 1999; Curtin, Presser, & Singer, 2000). This model is based on the notion that the propensity to respond to a survey can be viewed as a continuum and that among individuals who do respond to the survey, their propensity to respond is at least partially associated with how long it took them (in the recruitment process) to take the survey. Therefore, one can examine differences between "early responders" and "late responders" and infer that the pattern for late responders can be applied to or represent nonrespondents, because late responders and nonrespondents are both on the far end of the propensity to respond continuum. Another way of thinking about this issue is that late responders would have likely been nonrespondents if we had not followed up with nonrespondents as many times as we did or had shut down the Web survey early (note that the recruitment materials did not specify the end date of the survey, so sampled students did not know when it would be closed). Although this technique is not used to adjust any data, it enables us to compare early and late responders in an effort to learn something about nonrespondents.

We divided our sample of 5,446 women respondents into quintiles in terms of when in the recruitment process they responded. The first 20% who responded ($n = 1,089$) were in quintile 1, the second 20% who responded ($n = 1,089$) were in quintile 2, etc. We then compared the data from women in each of the five quintiles to determine whether respondents in each of the quintiles differed from each other on 17 measures, including race/ethnicity, age, year of study, alcohol use, marijuana use, illicit drug use, and a variety

of measures on sexual assault victimization. We also collapsed the quintiles to represent early responders (i.e., respondents in quintiles 1 and 2) and late responders (i.e., respondents in quintiles 3, 4, and 5) and made the same comparisons, both in a bivariate and multivariate fashion (to control for the effects of potentially confounding variables). We used the unweighted data for this comparison. Both the bivariate and multivariate analyses demonstrated that the only variables for which there was a significant difference based on either the five-category or two-category comparison were race/ethnicity and marijuana use. Black respondents were significantly more likely to be “late responders” than white respondents (67% vs. 59%), and students who reported any marijuana use since entering college were significantly more likely to be “late responders” than those who did not report marijuana use (62% vs. 59%). However, the differences, though statistically significant at the .05 level, were small.

The continuum of resistance analysis, which indicates black students responded later in the recruitment process, is supported by our unit nonresponse analysis, which indicated that black students were less likely to respond than white students. Overall, our continuum of resistance analysis suggests that late responders did not seem to be substantially different from early responders on a wide range of dimensions, most importantly on our measures of sexual assault. To the extent that nonrespondents are similar to late responders, one can speculate that the prevalence rates generated from the study are not biased by nonresponse.

Additional support for this speculation was found in our third approach for examining nonresponse. We conducted a brief follow up survey with a sample of the students who had not redeemed the incentive for the CSA survey (i.e., these students were assumed to be those who did not respond to the original survey). A total of 2,000 nonrespondents (limited to sophomores, juniors, and seniors due to the nonrespondent follow up survey being conducted in fall 2006—the academic year following the fielding of the original survey) were emailed an invitation to participate in a brief Web-based survey to determine why they chose not to participate in the original survey. Of these, 296 responded to the survey. Once the students confirmed that they had indeed not participated in the CSA survey¹², they were asked why they had not participated. Fourteen sample members stated that they never received the original recruitment e-mails, and 126 students (45%) were not sure whether they had received these e-mails. Interestingly, of those who either did not receive or were not sure whether they received the e-mails, 71% said that they would have taken the survey if they had received them. Among the sample members who either did receive the e-mails and chose to not participate or said that they *would not* have participated if they

¹²As mentioned previously, because the survey was anonymous the only indicator of participation was whether the student obtained an incentive code. We have no way to identify students who took the survey and did not obtain an incentive code. Eighty-one of the “nonrespondents” sampled for the nonrespondent follow-up survey reported that they indeed participated in the original survey, either partially or completely.

had received the e-mails, the most commonly reported reasons for nonparticipation were that they did not have time (reported by about two-thirds of the sample members) or that they never participate in Web-based surveys (reported by just over 20% of the sample members). An extremely small number of the respondents to the nonrespondent survey indicated that they did not participate because they had never experienced sexual assault ($n = 9$, 15.0%), or because they did not want to discuss their experiences with sexual assault victimization ($n = 4$, 6.7%).

Although these findings are constrained to the very small number of nonrespondents (to the original survey) who participated in the nonresponse follow-up survey, they are encouraging because they suggest that the reasons for not participating in the CSA study are factors that are not associated with sexual assault. If nonresponse were associated with victimization (such that either nonvictims were less likely to participate because they felt that they survey was not relevant to them or that victims were less likely to participate because they did not feel comfortable reporting their experiences), we would be less confident that the relatively high nonresponse did not substantially bias the sexual assault prevalence estimates developed from the data.

3.3 Data Analysis

3.3.1 Descriptive Analyses

We used a variety of descriptive analyses to familiarize ourselves with the data, assist in data cleaning and coding, and prepare for running multivariate models. We used frequency distributions, cross tabulations, bivariate correlations, partial correlations, chi-squares, and t-tests to review large amounts of data, recognize patterns in the data, inform the recoding of some variables, inform the creation of derived variables, and plan for bivariate and multivariate analyses.

In addition to helping us understand the data and plan for more advanced analyses, descriptive data were used extensively to describe

- our survey respondents,
- the victims and perpetrators of various types of sexual assault,
- the context and correlates of various types of sexual assault,
- the consequences of various types of sexual assault,
- the reporting and nonreporting of various types of sexual assault, and
- the experiences of victims of various types of sexual assault.

Generation of Prevalence Estimates

Since one of the primary purposes of the CSA Study is to generate prevalence estimates of distinct types of sexual assault experienced by undergraduate students before and after

they entered college, a detailed discussion of the methods used to classify respondents into the relevant categories is warranted. The specific wording of all sexual assault victimization items used to categorize victims by assault type is included in Appendix A. The first level of classification pertains to the ***nature of the sexual assault***. The two general types of sexual assault captured by the Web-based survey are physically forced sexual assault and incapacitated sexual assault (i.e., sexual assault when the victim was incapacitated and unable to provide consent).¹³ As described previously, the survey asked about these two types of sexual assault separately, with detailed follow-up questions asked for each type.

The second level of classification pertains to ***whether the assault was completed***. For physically forced sexual assault, data on both completed and attempted incidents were collected separately. Because recall of the event can be problematic for incapacitated sexual assault, we asked separately about events the respondent was certain happened and those the respondent suspected happened. In this report, the incapacitated sexual assault measures only include sexual assaults that the victim was certain happened.

The third level of classification pertains to incidents occurring ***before*** and ***since entering college***. For both physically forced and incapacitated sexual assault, data on completed and attempted (or, for incapacitated sexual assault, suspected) incidents were collected to reflect two time periods, before and since entering college.

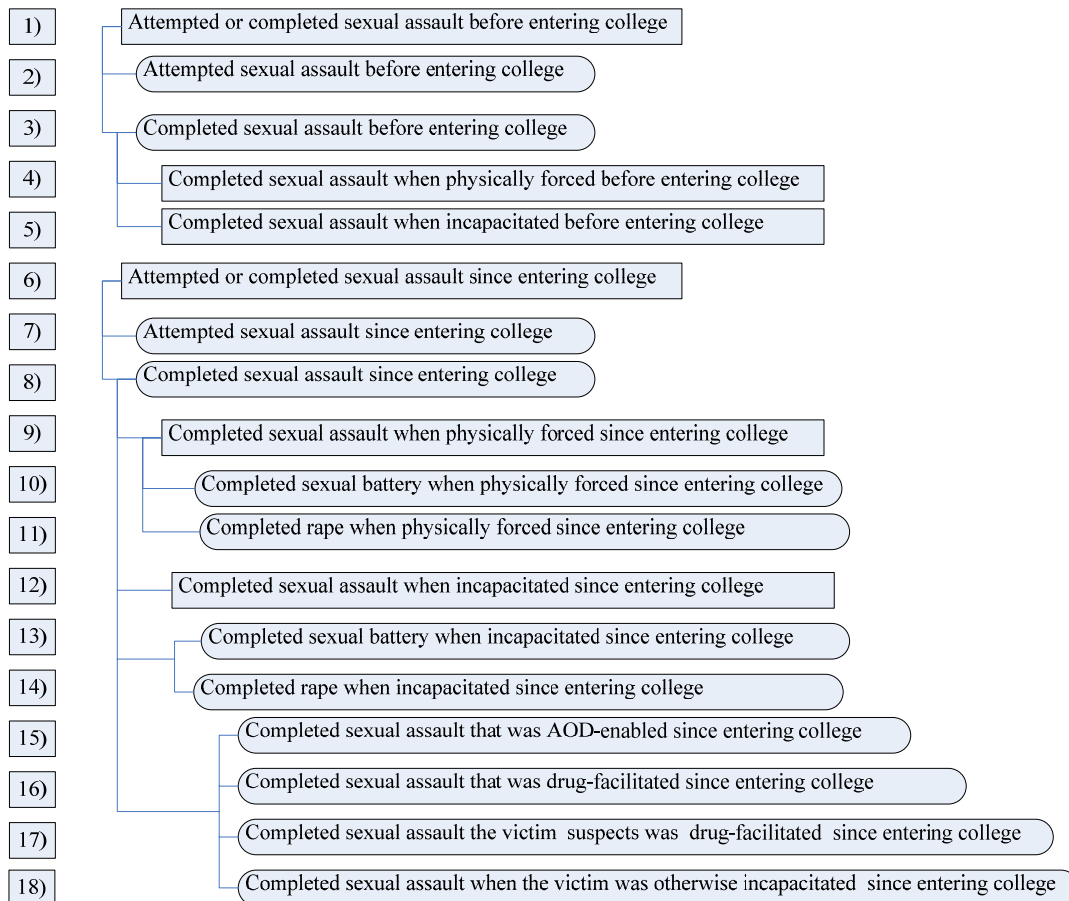
A fourth level of classification pertains to the ***severity of the sexual assault***. For completed incidents of both types (physically forced and incapacitated), we further classified sexual assault based on severity. Specifically, we generated subtype prevalence estimates for sexual battery (i.e., sexual assault that entailed sexual touching only) and rape (i.e., sexual assault that entailed oral, vaginal, or anal penetration). This level of categorization was achieved using responses to the follow-up questions about the specific type of sexual contact that occurred (forced touching of a sexual nature, oral sex, sexual intercourse, anal sex, and/or sexual penetration with a finger or object).

Given that a key objective of the current study was to contribute to the understanding of incapacitated sexual assault, a fifth level of classification was employed for incapacitated sexual assault to distinguish between ***AOD-enabled sexual assault, DFSA, Suspected DFSA, and other incapacitated sexual assault***. Using follow-up questions asked of victims who reported experiencing sexual assault when they were incapacitated and unable to provide consent, we further break down incapacitated sexual assault into finer categories. Specifically, students who reported sexual assault when they were incapacitated and unable to provide consent were asked whether they had been drinking alcohol or voluntarily been taking or using any drugs other than alcohol just before the incident and whether they had been given a drug without their knowledge or consent just before the incident. Based on

¹³As mentioned previously, the survey also gathered information on verbally coerced, unwanted sexual contact; data on this form of unwanted sexual contact are not presented in this report.

these responses, we divided the victims into four subtypes: those who were victims of drug-facilitated sexual assault (DFSA, i.e., they were sexually assaulted when they were incapacitated after they had been given a drug without their knowledge, and were certain about having been given a drug without their knowledge), those who were victims of suspected drug-facilitated sexual assault (SDFSA, i.e., they were sexually assaulted while incapacitated and suspected they had been given a drug without their consent prior to the assault), those who were victims of AOD-enabled sexual assault (i.e., they were sexually assaulted when they were incapacitated after voluntarily consuming drugs or alcohol), and those who were sexually assaulted when they were otherwise incapacitated. If a student was a victim of both AOD-enabled sexual assault and either DFSA or SDFSA, we classified her as a DFSA victim only. The 18 prevalence measures for sexual assault are summarized in Exhibit 3-2. All estimates presented in this report are based on weighted data.

Exhibit 3-2. Sexual Assault Prevalence Measures



3.3.2 Risk Factors for Sexual Assault

Bivariate Analyses

We ran cross tabulations by four sexual assault measures and a comprehensive set of individual characteristics and behavioral factors. Chi-squares were used to determine if the bivariate relationship between each sexual assault measure and each variable was statistically significant. These analyses helped us determine which variables should be considered for insertion into multivariate models.

Multivariate Analyses

We used binary logistic regression to analyze the CSA data in a multivariate framework. In the exploratory phase of our analyses, we used forward and backward stepwise selection procedures to assess the relationships between an array of variables of interest and sexual assault outcomes. Reviewing these models helped us determine whether certain variables needed to be recoded for, removed from, or added to the multivariate models. Development of the final models (presented in the Findings section of this report) was informed by these procedures as well as the existing literature. Variables that we felt were important to control for (e.g., race/ethnicity), are also included in the models.

Beyond the types of analyses we conducted to generate the CSA Study findings, it is worth discussing the purpose of the analyses or the overall goals of the multivariate analysis plan. Generally, the CSA Study was designed to generate data on the prevalence, nature, and reporting of various types of sexual assault. More specifically, the CSA Study was intended to

- document the prevalence of various types of sexual assault on university campuses;
- describe incidents, victims, and perpetrators of various types of sexual assault;
- identify risk and protective factors for, as well as consequences of, various types of sexual assault;
- describe the reporting and nonreporting of various types of sexual assault; and
- document attitudes about various types of sexual assault.

To achieve these goals, numerous measures that could be associated with various types of sexual assault were created and prepared for use in logistic regression models of various sexual assault outcomes. The independent and dependent variables considered and used are discussed below.

Dependent Variables. The CSA Study collected information about women's experiences with physically forced and incapacitated sexual assault. Within incapacitated sexual assault, we are able to distinguish between incapacitation achieved by the perpetrator giving the victim a drug without her knowledge or consent (*DFSA and SDFSA*) or the victim voluntarily consuming alcohol and/or other drugs (*AOD-enabled sexual assault*). Since the large

majority of incapacitated sexual assaults occurred after the victim voluntarily consumed alcohol or drugs (of the 651 women who experienced an incapacitated sexual assault, 86% were classified as having experienced AOD-enabled assault), the multivariate analyses are limited to victims of AOD-enabled sexual assault.

The survey design allowed a respondent to report being a victim of *both* forced sexual assault and AOD-enabled sexual assault. Almost two percent of the sample ($n = 101$) reported both types of sexual assault. Preliminary analyses indicated that this group was significantly different from the women who experienced forced sexual assault only and from the respondents who experienced AOD-enabled sexual assault only; therefore, the multivariate models include three mutually exclusive categories of sexual assault: (1) being a victim of forced sexual assault only, (2) being a victim of a completed AOD-enabled sexual assault only, and (3) being a victim of *both* forced and AOD-enabled sexual assault, in an effort to identify risk factors associated with each form of sexual assault. *Physically forced sexual assault* includes assaults occurring when the victim was forced or threatened with force into sexual contact. *AOD-enabled sexual assault* is a subset of incapacitated assaults (assaults occurring when a victim is unable to provide consent or stop what is happening because she is passed out, drugged, drunk, incapacitated or asleep), in which the victim's incapacitation was due to voluntary consumption of alcohol and/or other drugs. All models are limited to *completed assaults that occurred since the women entered college*.

All sexual assault outcomes are binary coded (0 = no, 1 = yes), with women who were not victims of any form of completed sexual assault in the reference category. In the CSA study, sexual assault includes rape (assaults involving oral, vaginal or anal sex, or vaginal or anal penetration with a finger or object) and sexual battery (assaults involving sexual contact only, such as forced kissing or fondling). The decision to present the results for the more inclusive category of sexual assault was based on supplementary analyses conducted for the subsets of rape victims. The results from these analyses did not differ from those based on the more inclusive measures of sexual assault, which indicates that the inclusion of sexual battery in the dependent variable does not substantially affect or alter the relationships of interest (results not shown). It is noteworthy that the majority of all sexual assaults involved oral, vaginal, or anal penetration and thus met the legal definition of rape in most states. The CSA Study collected data on verbally coerced sexual assaults; however, since those incidents typically do not meet the legal definition of sexual assault, data on them are not presented in the current report.

Independent Variables. A comprehensive set of individual characteristics and behavioral factors were used in the logistic regression models as independent variables and/or to describe the sample. The number of years the respondent has been in college is a continuous variable ranging from 1 to 10. Race/ethnicity is dummy coded into black, Hispanic, and other, with white as the reference category. College experiences are measured by grade point average (GPA) (categorical), whether the respondent has ever

failed a course, and whether the respondent is a member of a Greek social organization. Frequency measures of attending fraternity parties; attending parties where alcohol was served; and going to bars, pubs or clubs are measured as 0 = never, 1 = less than once a month, and 2 = at least once a month.

There are several indicators of substance use. Use is dummy coded for marijuana and illicit substances, a collapsed measure of ever using at least 1 of 12 illicit substances other than marijuana. The frequency with which a respondent has been drunk since entering college is coded never, less than once a month, and at least once a month. Respondents were also asked if they suspected or knew they had ever been given a drug without their knowledge or consent since they entered college.

Dating and sexual history are measured by number of dating partners and sexual partners since entering college (categorical). Married respondents (n = 151) were not asked their number of dating partners; however, to conserve cases for analyses, they were coded 0 on this indicator. Frequency measures of being drunk or high during sex are coded as never, less than once a month, or more than once a month. Dating violence is measured as ever feeling threatened, humiliated, or controlled by a dating partner and ever being hit, slapped, kicked, or physically hurt by a dating partner (1 = yes, 0 = no). Past sexual victimization is measured as forced sexual assault and sexual assault when incapacitated before college (1 = yes, 0 = no). Exhibit 4, which appears in the next section of the report, presents additional sample descriptors not used in or dropped from the regression analyses. To control for unmeasured heterogeneity between universities, a dummy variable for school was included in analyses.

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4. STUDY SAMPLE

4.1 Women

Descriptive data on the women in our sample are presented in Exhibit 4-1. As the data indicate, the majority of the women are white, although a sizeable proportion of them are black or in the other race category, which includes women who selected more than one racial/ethnic category, as well as Asians, Native Hawaiians/Other Pacific Islanders, and American Indians/Alaska Natives. Only 3.0% of the sample reported being Hispanic. Most of the women reported being heterosexual (95.6%). The majority of the sample is 20 or younger, and there are larger percentages of freshman and seniors in the sample than sophomores and juniors, which reflects the distribution at the participating universities (since the data are weighted for year of study).

Almost 15% of women belong to a sorority, and 26.3% reported attending fraternity parties at least once a month, whereas 63% reported attending parties where alcohol is served and 44.4% reported going to pubs, bars, or clubs at least once a month. Most of the sample had had at least one dating partner and at least one sexual partner since entering college. With regard to substance use, 85.9% reported using alcohol, 33.9% reported using marijuana, and 8.6% reported using an illicit drug (other than marijuana) since entering college. Forty-four percent reported getting drunk at least once a month. Since entering college, 28% had accepted a drink from a stranger (with 5.6% of the sample reporting accepting drinks from strangers at least once a month), and 13% had consumed a drink after leaving it unattended (with 1.9% engaging in this behavior at least once a month). Over a quarter of the sample (26.3%) reported consuming alcohol or drugs before sex once a month since entering college, and 20.7% reported being drunk or high during sex at least once a month since entering college. When asked if they had been given a drug without their knowledge or consent since entering college, 5.3% of the women responded affirmatively. The drugs these women reported being given, in order of prevalence, were Rohypnol, GHB, cocaine, ecstasy, LSD, marijuana, and stimulants (data not shown).

4.2 Men

Exhibit 4-2 presents descriptive data on the male sample (n = 1,375). As seen in the female sample, the majority of males are white, but a smaller proportion of males are black, Hispanic, or in the other race category. Most of the men reported being heterosexual and was 20 years old or younger, and the largest percentage is freshmen (27.0%).

Approximately 21% of the men belong to a sports team, 15.8% belong to a fraternity, and 44.9% reported attending fraternity parties at least once a month (compared with 26.3% of females). About 70% reported attending parties where alcohol is served, and 45% reported going to pubs, bars, or clubs at least once a month, respectively. Most of the sample has had at least one dating partner and at least one sexual partner since entering college. With

Exhibit 4-1. Descriptive Data on CSA Sample of Undergraduate Women, Weighted Percentages (n = 5,446)^a

Demographics			
Race		Attended party where alcohol served	
White	66.9	Never	9.1
Black	16.2	Less than once a month	27.9
Hispanic	3.0	At least once a month	63.0
Other	14.0	Gone to pub/bar/club	
Sexual orientation		Never	19.9
Heterosexual	95.6	Less than once a month	35.7
Lesbian/gay	0.7	At least once a month	44.4
Bisexual	3.7	Dating partners	
Age ^b		Zero	22.6
18	19.8	1–5	69.2
19	24.2	6–10	5.6
20	19.0	11–25	2.3
21	19.0	26 or more	0.3
22+	17.3	Sexual partners	
College Experiences^c		Zero	37.2
Classification		1–5	54.1
Freshman	29.9	6–10	5.7
Sophomore	22.8	11–25	2.0
Junior	20.7	26 or more	1.1
Senior	26.6	Substance Use Since Entering College	
GPA and course experiences		Alcohol	85.9
GPA below 1.66	0.8	Marijuana	33.9
GPA 1.67–2.66	12.1	Illicit drugs (excluding marijuana)	8.6
GPA 2.67–3.66	64.4	Number of times gotten drunk	
GPA 3.67 and above	22.6	Never	29.6
Failed a course	18.6	Less than once a month	26.4
Opinion of college		At least once a month	44.0
Really like it	46.9	Consumed drink given by someone unknown	
Like it	37.3	Never	72.3
Neutral about it	12.3	Less than once a month	22.1
Do not like it	3.4	At least once a month	5.6
Would choose this college again		Consumed drink after leaving it unattended	
No	9.5	Never	87.1
Yes	27.2	Less than once a month	11.1
Maybe	63.3	At least once a month	1.9
College socialization		Consumed alcohol/drugs before sex	
Belong to a sports team	16.0	Never	52.5
Belong to a Greek organization	14.7	Less than once a month	21.2

(continued)

Exhibit 4-1. Descriptive Data on CSA Sample of Undergraduate Women, Weighted Percentages (n = 5,446)^a (continued)

College Experiences ^c (continued)		Substance Use Since Entering College (continued)	
Attended a fraternity party		At least once a month	26.3
Never	28.6	Drunk/high during sex	
Less than once a month	45.3	Never	59.2
At least once a month	26.3	Less than once a month	20.1
		At least once a month	20.7
		Suspected/known given drug without consent	5.3

^aUnweighted sample size.

^bMean and standard deviation not presented because variable is a categorical measure.

^cData reflect since entering college.

regard to substance use, 84.9% reported using alcohol, 41.2% reported using marijuana, and 12.1% reported using an illicit drug (other than marijuana) since entering college. Other behaviors males reported engaging in at least once a month since entering college include getting drunk (54.1%), accepting drinks from strangers (8.7%), consuming a drink after it was left unattended (1.4%), consuming alcohol or drugs before sex (27.3%), and being drunk or high during sex (21.5%). Compared with 5.3% of women, only 2.9% of men reported having ever been given a drug without their knowledge or consent since entering college, with the highest percentage reporting being given Rohypnol or an unknown substance (data not shown).

Exhibit 4-2. Descriptive Data on CSA Sample of Undergraduate Men, Weighted Percentages (n = 1,375)^a

Demographics			
Race		Attended party where alcohol served	
White	84.3	Never	8.3
Black	7.8	Less than once a month	21.9
Hispanic	1.8	At least once a month	69.8
Other	6.1	Gone to pub/bar/club	
Sexual orientation		Never	23.2
Heterosexual	94.5	Less than once a month	32.1
Lesbian/gay	2.6	At least once a month	44.7
Bisexual	2.9	Dating partners	
Age ^b		Zero	23.8
18	15.6	1–5	68.4
19	21.7	6–10	5.9
20	19.1	11–25	1.2
21	20.3	26 or more	0.7
22+	23.3	Sexual partners	
College Experiences ^c		Zero	42.8
Classification		1–5	49.4
Freshman	27.0	6–10	5.6
Sophomore	22.3	11–25	0.9
Junior	25.5	26 or more	1.3
Senior	25.3	Substance Use Since Entering College	
GPA and course experiences		Alcohol	84.9
GPA below 1.66	0.5	Marijuana	41.2
GPA 1.67–2.66	12.8	Illicit drugs (excluding marijuana)	12.1
GPA 2.67–3.66	65.3	Number of times gotten drunk	
GPA 3.67 and above	21.4	Never	24.8
Failed a course	19.8	Less than once a month	21.2
Opinion of college		At least once a month	54.1
Really like it	42.2	Consumed drink given by someone unknown	
Like it	40.7	Never	66.3
Neutral about it	13.1	Less than once a month	25.0
Do not like it	4.0	At least once a month	8.7
Would choose this college again		Consumed drink after leaving it unattended	
No	9.2	Never	79.0
Yes	28.0	Less than once a month	16.9
Maybe	62.7	At least once a month	1.4

(continued)

Exhibit 4-2. Descriptive Data on CSA Sample of Undergraduate Men, Weighted Percentages (n = 1,375)^a

College Experiences ^c (continued)		Substance Use Since Entering College (continued)	
College socialization		Consumed alcohol/drugs before sex	
Belong to a sports team	21.4	Never	56.1
Belong to a Greek organization	15.8	Less than once a month	16.7
Attended a fraternity party		At least once a month	27.3
Never	27.0	Drunk/high during sex	
Less than once a month	44.9	Never	60.7
At least once a month	28.1	Less than once a month	17.8
		At least once a month	21.5
		Suspected/known given drug without consent	2.9

^aUnweighted sample size

^bMean and standard deviation not presented because variable is a categorical measure

^cData reflect since entering college

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5. FINDINGS

5.1 Sexual Assault Victimization

5.1.1 Prevalence Estimates

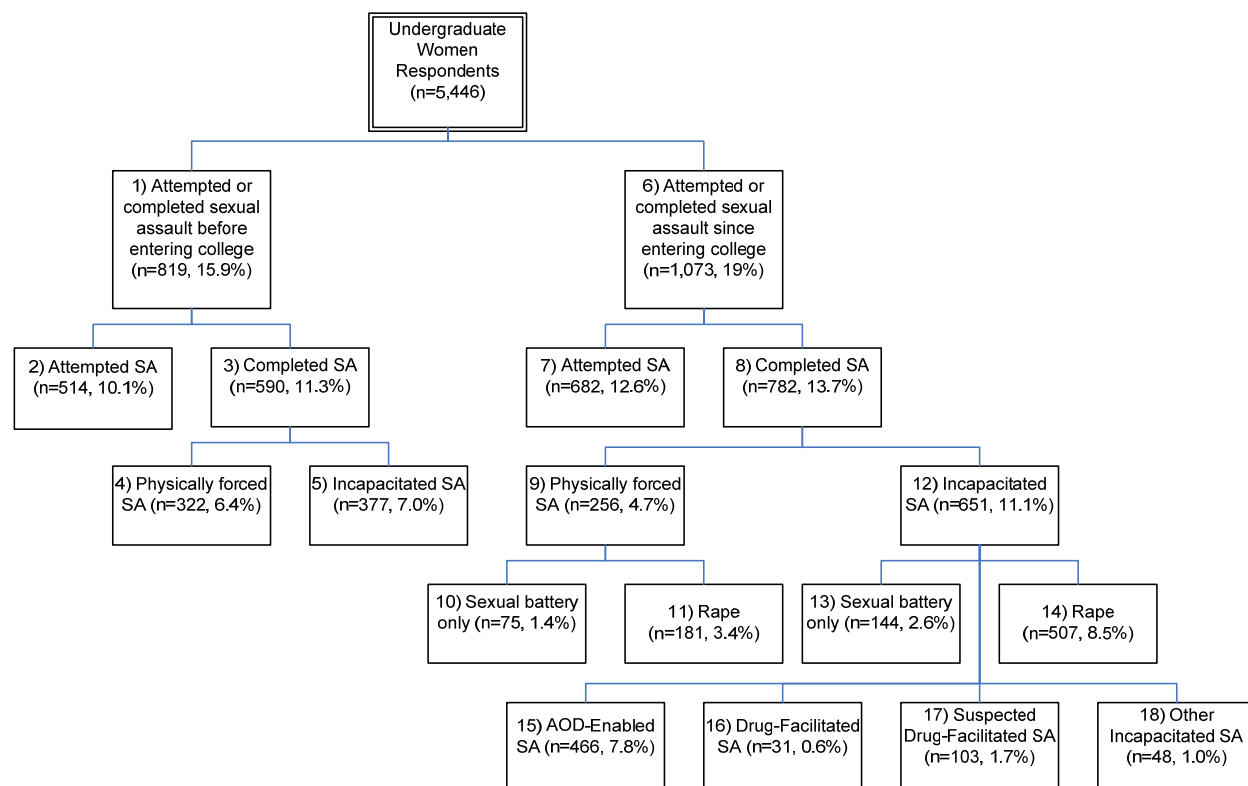
Women

Prevalence estimates for undergraduate women and the 18 measures of sexual assault are presented in Exhibit 5-1. Each prevalence estimate has a number in parentheses that corresponds to the descriptive list of estimates presented in Exhibit 3-2. The first and most inclusive set of measures we present are the number and percentage of undergraduate women who reported being a victim of attempted or completed sexual assault of any type before entering college (1) ($n = 819$, 15.9%) and since entering college (6) ($n = 1,073$, 19.0%). The next set of prevalence estimates breaks down attempted and completed assaults for each time period. As shown in the figure, the prevalence of completed sexual assault is slightly higher than that of attempted¹⁴ sexual assault for incidents occurring both before (2 and 3) and after (7 and 8) entering college. The data are not shown, but 5.5% of undergraduate women (when limited to experiences before college) and 7.2% of undergraduate women (when limited to experiences since entering college) reported experiencing both attempted and completed sexual assault.

The third set of prevalence estimates rates are breakdowns of completed sexual assault by time period for the two primary types of assault included in this study (physically forced vs. incapacitated sexual assault). When examining this set of prevalence estimates, an interesting pattern is evident. The prevalence of physically forced sexual assault was roughly equivalent for the time period reflecting experiences since entering college (9) and those occurring before entering college (4) (4.7% vs. 6.4%, respectively). In contrast, the prevalence of sexual assault occurring when the victim was incapacitated is higher for the time period reflecting experiences since entering college (12) than before entering college (5) (11.1% vs. 7.0%, respectively). Exhibit 5-2 is a graphical depiction of the pattern of differential risk for the two main types of sexual assault by time period. The pattern shown in Exhibit 7 suggests that, among undergraduate college women, the risk of experiencing sexual assault when they are incapacitated is greater during college than the risk before entering college, whereas the risk of experiencing physically forced sexual assault is roughly similar (but slightly lower since entering college) in both time periods. A small number of women were victimized both before and since entering college. Sixty-eight women (1.4% of the sample) were victims of forced sexual assault both before and since entering college, and 140 women (2.5% of the sample) were victims of incapacitated sexual assault both before and since entering college (data not shown).

¹⁴As mentioned previously, the measure of attempted sexual assault is restricted to incidents in which the assault was attempted *but not completed*.

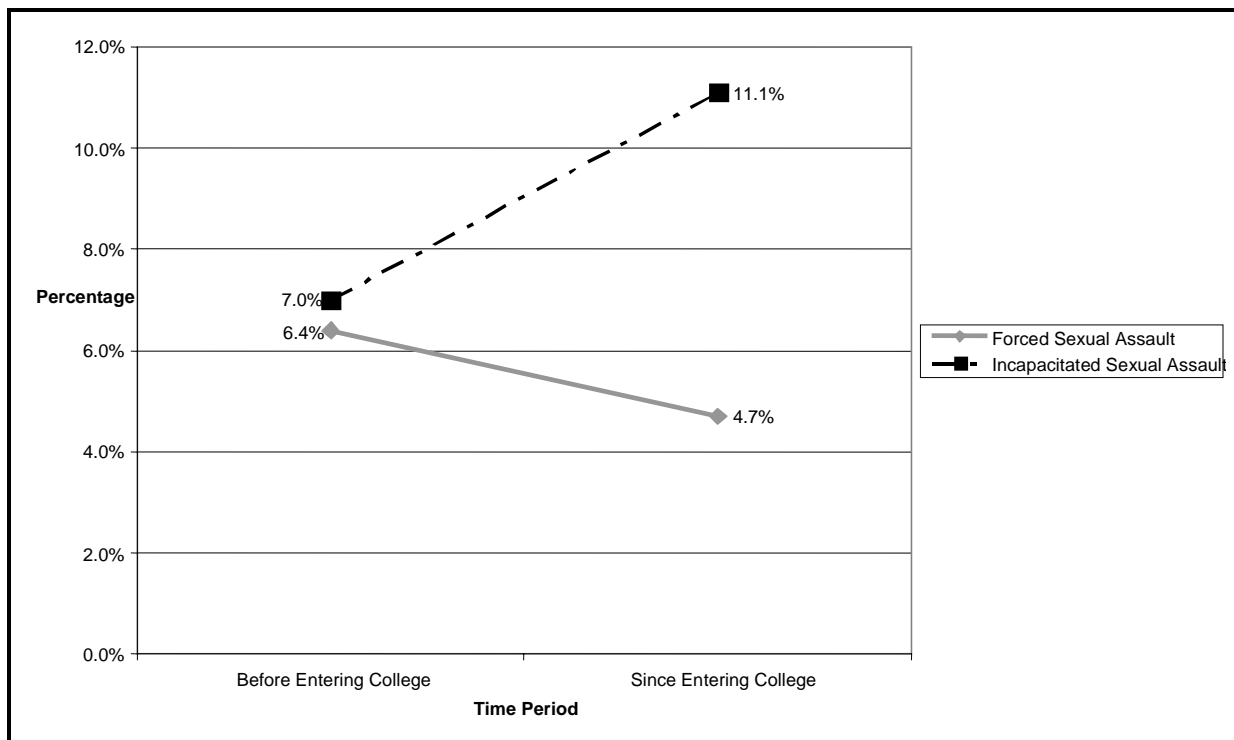
Exhibit 5-1. Prevalence Estimates for the Sexual Assault Measures for Women, Unweighted Frequencies, Weighted Percentages



The fourth set of prevalence estimates show, for completed incidents since entering college, the number and percentage of university women experiencing sexual assaults of varying severity. Sexual battery was defined as sexual assault that entailed sexual touching only, and rape was defined as sexual assault that entailed oral, vaginal, or anal penetration. As shown in Exhibit 5-1, 3.4% of women reported experiencing rape that was physically forced (11), 1.4% reported experiencing sexual battery (but not rape) that was physically forced (10), 8.5% of the sample reported experiencing rape while they were incapacitated and unable to provide consent (14), and 2.6% reported experiencing sexual battery (but not rape) while they were incapacitated and unable to provide consent (13). Exhibit 5-3 shows the breakdown of assault severity separately for the two major types of sexual assault. The graphic depiction helps illustrate that roughly the same proportions of victims experience rape and sexual battery for the two major types of sexual assault.

The final set of prevalence estimates included in Exhibit 5-1 further classify sexual assault occurring when the victim was incapacitated and unable to provide consent. Specifically, estimates are shown for AOD-enabled sexual assault (i.e., assault that happened after the victim voluntarily consumed alcohol and/or drugs) (15), DFSA (drug-facilitated sexual assault) (16), SDFSA (suspected drug-facilitated sexual assault) (17), and incidents that

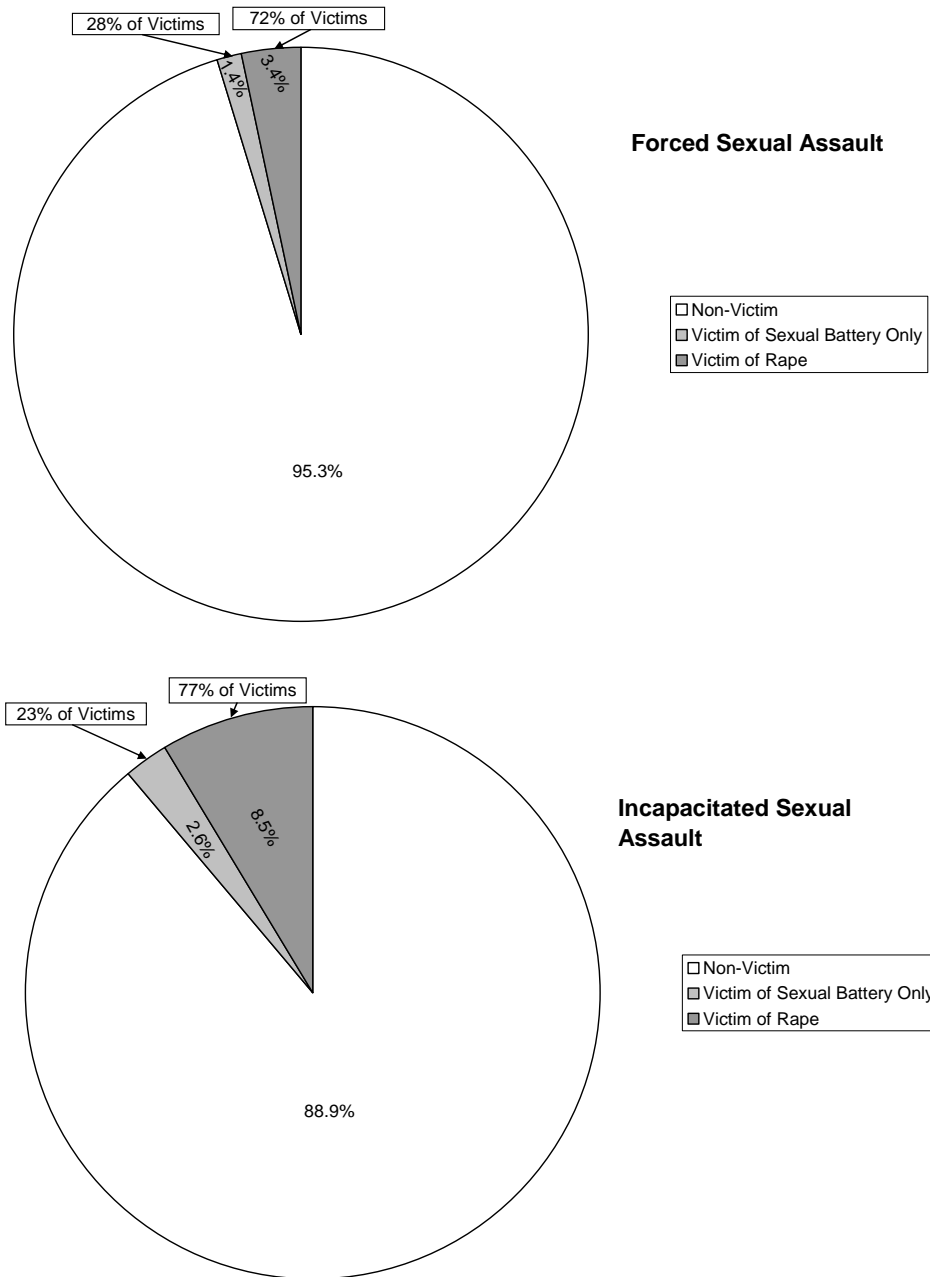
Exhibit 5-2. Percentage of Undergraduate Women Who Report Being a Victim of Forced and Incapacitated Sexual Assault Before and Since Entering College



happened after the victim was otherwise incapacitated (typically involving situations in which the victim was asleep) (18). A total of 466 women (7.8%) were victims of sexual assault that was AOD-enabled, 31 women (0.6%) were victims of DFSA, 103 women (1.7%) were victims of SDFSAs, and 48 women (1.0%) reported being sexually assaulted when they were otherwise incapacitated and unable to provide consent (i.e., their incapacitation was not enabled by drugs or alcohol).

The data presented in this section have shown the prevalence of various measures of sexual assault among university women in a “snapshot” in time. Overall, 19% of undergraduate women reported experiencing attempted or completed sexual assault since entering college. However, half (52.7%) of our sample had experienced less than 2 years of college. This makes it difficult to predict a woman’s risk of sexual assault during her overall college career. Therefore, another way of looking at these data is to focus on seniors, who are theoretically in their last year of college. When subsetting to seniors, the data show that 368 women (26.3% of seniors) reported experiencing attempted or completed sexual assault since entering college, 6.9% of seniors were victims of physically forced sexual assault since entering college, and 16% of seniors were victims of incapacitated sexual assault since entering college.

Exhibit 5-3. Percentage of Victims of Physically Forced and Incapacitated Sexual Assault Who Experienced Sexual Battery Only and Rape



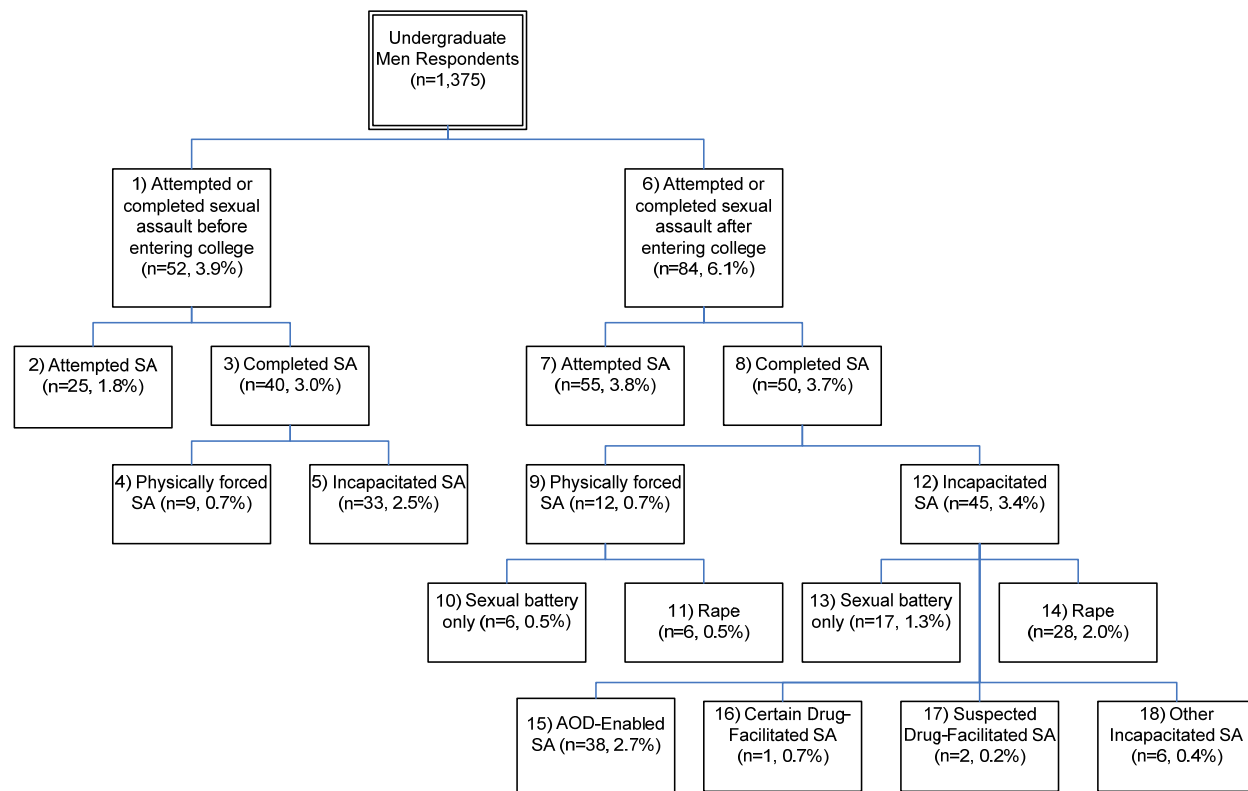
It is important to note, however, that although the cumulative prevalence estimates of sexual assault are understandably highest for seniors, the “past 12 month” prevalence estimates of sexual assault are highest among sophomores (data not shown).¹⁵ This pattern indicates that women who are victimized during their college career are most likely to be victimized early during their college tenure. This finding is consistent with the literature, including a recent study employing a convenience sample of university women, which found that 84% of the women who reported sexually coercive experiences experienced the incident during their first four semesters on campus (Gross, Winslett, Roberts, & Gohm, 2006).

Men

Exhibit 5-4 illustrates prevalence estimates for the 18 measures of sexual assault among the undergraduate male sample (n = 1,375). Although the prevalence of sexual assault is considerably lower among the male sample than the female sample, there are some estimates worth noting. Approximately 6.1% (n = 84) of males reported experiencing attempted or completed sexual assault since entering college (6). Half of them (n = 50, 3.7%) experienced a *completed* sexual assault (8). Among victims of completed sexual assault since entering college, incapacitated sexual assault was much more prevalent (12) (n = 45, 3.4%) than physically forced sexual assault (9) (n = 12, 0.7%). Only 0.7% of the male sample reported experiencing physically forced sexual assault (9) (n = 12). As was the case among the female undergraduate sample, a majority of the male victims of incapacitated sexual assault were classified as having experienced AOD-enabled sexual assault (i.e., assault that happened when the victim was incapacitated after voluntarily consuming alcohol and/or drugs); the prevalence for this type of assault among males was 2.7% (15). Although male victims were asked all of the same follow-up questions as female victims, given that very few male victims of sexual assault were identified, we are not able to present any contextual or descriptive data on the sexual assault of males as we do for females below.

¹⁵Although the “past 12 month” prevalence is also high among freshmen, they were excluded from these comparisons of sexual assault prevalence because they had not experienced 12 months of college.

Exhibit 5-4. Prevalence Estimates for the Sexual Assault Measures for Men, Unweighted Frequencies, Weighted Percentages



5.1.2 Risk Factors Associated with Sexual Assault Among University Women

Bivariate Results

The purpose of this section of the final report is to identify risk and protective factors for various types of sexual assault experienced by university women. These analyses were not run for males because we had no plans of modeling sexual assault using the male sample given the relatively small sample size and low prevalence estimates. It is important to acknowledge that the cross-sectional nature of our data prevent a temporal understanding of the role of these factors in increasing (or decreasing) risk for sexual assault. However, the data are useful in understanding subgroups of the university population that appear most likely to have experienced sexual assault. The information provides insight into the types of sexual assault undergraduate women are at greatest risk of experiencing and what individual characteristics and behavioral factors seemingly put them at risk for each type of sexual assault. The results can inform the development of prevention and risk reduction programming, campus policies, and crisis and law enforcement response strategies.

We ran cross tabulations by four mutually exclusive outcomes experienced since entering college: physically forced sexual assault only, AOD-enabled sexual assault only, *both* physically forced and AOD-enabled sexual assault, and no sexual assault (nonvictims). Chi-squares were used to determine if the bivariate relationship between each sexual assault measure and each variable was statistically significant. These analyses, which are shown in Exhibit 5-5, helped us determine which variables should be considered for insertion into multivariate models.

Given the large sample size and the fact that the prevalence estimates for each measure of sexual assault are not negligible, it is not surprising that the majority of the bivariate analyses are statistically significant at the 0.05 level. As shown in Exhibit 5-5, the prevalence of sexual assault differs by a variety of demographic and behavioral characteristics. For the most part, students who appear at greater risk for experiencing sexual assault have an increased risk of all types of assault. However, distributions varied widely for some variables across sexual assault type. For example, black women comprised a much higher percentage of physically forced only victims (23%) than any other victimization type. Among AOD-enabled only victims, the vast majority (80%) were white. Seniors represented the highest percentage of victims in each assault type. Interestingly, almost a quarter of the victims of both types of sexual assault belonged to a sorority, whereas only 14% of nonvictims were sorority members.

Attendance at fraternity parties and parties where alcohol was served was much higher among victims of AOD-enabled and both types of sexual assault than for physically forced victims only. Ninety percent of AOD-enabled victims reported attending a party where alcohol was served at least once a month, compared to 57% of physically forced sexual assault victims. Substance use was higher among victims of AOD-enabled only and both types of sexual assault, compared to victims of physically forced sexual assault and nonvictims. Much higher proportions of AOD-enabled only sexual assault victims report getting drunk, accepting drinks from strangers, leaving drinks unattended, and consuming alcohol or drugs and/or being drunk or high during sex, since entering college.

Multivariate Results

Logistic regression models were used to identify factors associated with being a victim of three types of assault: physically forced sexual assault only, AOD-enabled sexual assault only, or both physically forced and AOD-enabled sexual assault. In some cases, covariates in the models reflect individual characteristics and in others represent potential behavioral risk factors. The purpose of each model is to identify individual characteristics and behavioral factors that are associated with being a victim of each type of assault. Although there are certainly some similarities across the three models, there are also some notable differences. Results of each of the models are presented in Exhibit 5-6.

Exhibit 5-5. Prevalence of Various Measures of Sexual Assault Within Demographic and Behavioral Factors for Undergraduate Women (n = 5,361)^a

	Forced SA Only	AOD-Enabled SA Only	Both Forced and AOD-Enabled SA	Nonvictims	Sig.
	%	%	%	%	
Demographics					
Race					
White	54.9	79.8	64.2	66.5	***
Black	23.4	8.1	9.8	16.8	
Hispanic	7.1	2.4	1.6	2.9	
Other	14.6	9.6	24.5	13.8	
Sexual orientation					
Heterosexual	89.0	95.2	88.2	96.0	***
Lesbian/gay	0.0	0.6	0.0	0.7	
Bisexual	11.0	4.2	11.8	3.3	
College Experiences^b					
Classification					
Freshman	16.6	19.0	9.1	32.0	***
Sophomore	20.9	20.9	26.1	23.0	
Junior	22.9	21.6	31.6	20.2	
Senior	39.6	38.2	33.3	24.7	
College socialization					
Belong to a Greek organization	14.1	22.3	24.1	13.9	***
Attended a fraternity party					
Never	23.3	10.0	12.2	30.7	***
Less than once a month	57.6	47.4	45.4	44.6	
At least once a month	19.1	42.6	42.5	24.8	
Attended party where alcohol served					
Never	3.2	0.1	0.9	10.3	***
Less than once a month	39.6	9.9	8.3	29.5	
At least once a month	57.3	90.0	90.8	60.2	
Gone to pub/bar/club					
Never	9.6	3.7	5.6	22.3	***
Less than once a month	36.0	26.9	29.4	36.3	
At least once a month	54.5	69.5	65.0	41.4	
Dating partners					
Zero	8.7	12.8	5.2	24.6	***
1–5	67.2	69.8	62.1	69.2	
6–10	13.3	11.5	25.7	4.3	
11–25	10.2	5.0	6.3	1.8	
26 or more	0.6	1.0	0.8	0.2	

(continued)

Exhibit 5-5. Prevalence of Various Measures of Sexual Assault Within Demographic and Behavioral Factors for Undergraduate Women (n = 5,361)^a (continued)

	Forced SA Only	AOD-Enabled SA Only	Both Forced and AOD-Enabled SA	Nonvictims	Sig.
	%	%	%	%	
College Experiences^b (continued)					
Sexual partners					
Zero	23.9	17.6	16.1	40.3	***
1–5	54.0	61.4	48.4	53.2	
6–10	15.1	13.5	20.4	4.3	
11–25	6.5	6.7	9.5	1.2	
26 or more	0.6	0.8	5.7	1.0	
Substance Use Since Entering College					
Alcohol	90.7	99.9	100.0	84.1	***
Marijuana	39.2	65.0	62.3	30.0	***
Illicit drugs (excluding marijuana)	15.9	20.0	25.0	6.8	***
Number of times gotten drunk					
Never	30.2	0.4	3.8	33.0	***
Less than once a month	28.9	20.1	13.9	26.9	
At least once a month	40.9	79.6	82.4	40.1	
Consumed drink given by someone unknown					
Never	65.0	46.3	38.0	75.9	***
Less than once a month	29.9	38.9	45.8	19.6	
At least once a month	5.1	14.7	16.2	4.6	
Consumed drink after leaving it unattended					
Never	86.0	68.5	58.1	89.5	***
Less than once a month	13.4	24.2	37.8	9.2	
At least once a month	0.6	7.4	4.1	1.3	
Consumed alcohol/drugs before sex					
Never	48.9	19.9	17.8	56.9	***
Less than once a month	20.6	21.3	20.5	21.0	
At least once a month	30.6	58.8	61.7	22.1	
Drunk/high during sex					
Never	57.9	23.3	21.2	63.7	***
Less than once a month	19.2	25.7	25.1	19.4	
At least once a month	22.9	51.0	53.7	17.0	
Suspected/known given drug without consent	8.8	15.1	28.2	3.4	***

(continued)

Exhibit 5-5. Prevalence of Various Measures of Sexual Assault Within Demographic and Behavioral Factors for Undergraduate Women (n = 5,361)^a (continued)

	Forced SA Only	AOD-Enabled SA Only	Both Forced and AOD-Enabled SA	Nonvictims	Sig.
	%	%	%	%	
Victimization Since Entering College					
Threatened/humiliated by dating partner	56.0	28.3	56.9	12.8	***
Physically hurt by dating partner	32.6	9.0	27.6	3.7	***
Victimization Before Entering College					
Any completed sexual assault ^b	29.6	25.8	30.8	8.5	***
Forced sexual assault	28.3	7.6	24.3	5.0	***
Incapacitated sexual assault	5.9	21.3	21.1	5.0	***

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^aUnweighted sample size; 85 cases were deleted from analyses due to DFSA victimization or missing information (see text for additional details)

^bData reflect time since entering college.

We discuss the odds ratios associated with each independent variable. An odds ratio is a statistic that conveys the risk of a particular outcome (e.g., being a victim of a certain type of sexual assault) if a certain independent variable or factor is present. It is a relative measure of risk, telling you how much more (or less) likely it is that someone who presents a particular risk factor will experience a given outcome compared to someone who does not that particular risk factor. If no relationship exists between a risk factor and the outcome, the odds ratio will be 1.0. An odds ratio above 1.0 indicates a positive relationship between the risk factor and the outcome (i.e., the presence of the risk factor increases the odds that the outcome will be realized), and an odds ratio below 1.0 indicates a negative relationship between the risk factor and the outcome (i.e., the presence of the risk factor decreases the odds that the outcome will be realized).

Being a Victim of Physically Forced Sexual Assault Only. Having been a victim of physically forced sexual assault before entering college was significantly associated with experiencing physically forced sexual assault since entering college. Experiencing sexual assault when incapacitated prior to entering college did not reach statistical significance at conventional alpha levels (e.g., 0.05). Interestingly, none of the substance use measures were significantly associated with physically forced sexual victimization. Several variables

Exhibit 5-6. Logistic Regression Models of Four Sexual Assault Measures (n = 4,646)^a

Independent Variables	Model 1			Model 2			Model 3		
	Forced Sexual Assault Only (n = 131)			AOD-Enabled Sexual Assault Only (n = 465)			Forced and AOD-Enabled Sexual Assault (n = 101)		
	B	Standard Error	Exp(B)	B	Standard Error	Exp(B)	B	Standard Error	Exp(B)
Intercept	-5.36	0.32	0.01***	-5.49	0.27	0.00***	-7.50	0.55	0.00***
Demographics									
Years in college	0.16	0.06	1.18*	0.13	0.04	1.14**	0.08	0.09	1.09
Black ^b	0.35	0.25	1.43	-0.24	0.20	0.79	0.05	0.39	1.05
Hispanic ^b	0.70	0.41	2.01	-0.48	0.36	0.62	-0.53	0.86	0.59
Other ^b	-0.08	0.28	0.92	-0.44	0.19	0.64*	0.60	0.28	1.82*
Lifestyle Activities During College									
Attend fraternity parties	0.17	0.15	1.19	0.32	0.09	1.38***	0.29	0.19	1.34
Number of male sexual partners	0.32	0.11	1.37**	0.06	0.08	1.06	0.30	0.12	1.35*
Substance Use Since Entering College									
Get drunk	-0.13	0.15	0.88	0.79	0.13	2.21***	0.71	0.25	2.24**
Given drug w/out knowledge	0.68	0.360	1.98	0.85	0.18	2.33***	1.64	0.28	5.13***
Used marijuana	-0.08	0.25	0.92	0.37	0.13	1.45**	-0.01	0.26	0.99
Used drugs other than marijuana	0.52	0.34	1.68	-0.07	0.16	0.94	0.06	0.31	1.06
Drunk during sex	-0.33	0.17	0.72	0.44	0.09	1.55***	0.34	0.17	1.40
Threatened/Humiliated or Physically Hurt by Dating Partner	2.00	0.19	7.38***	0.64	0.13	1.89***	1.66	0.23	5.25***
Prior Sexual Victimization									
Victim of forced sexual assault before college	1.88	0.24	6.58***	-0.29	0.23	0.75	0.95	0.33	2.59**
Victim of sexual assault when incapacitated before college	-0.81	0.42	0.44	1.28	0.16	3.58***	0.65	0.33	1.92*
Pseudo R-square ^c	0.22			0.25			0.29		

* $p < .05$, ** $p < .01$, *** $p < .001$ (two-tailed tests)

^aUnweighted sample size; 85 cases were deleted from analyses due to DFSA victimization or insufficient information to classify their type of victimization.

^bReference category is white.

^cNagelkerke Psuedo R-square represents the strength of association between independent and dependent variables and should not be interpreted as a measure of model fit or the proportion of variance explained.

reflecting college experiences were associated with an increased risk of physically forced sexual assault. The number of sexual partners a woman has had since entering college was significantly associated with forced sexual assault only, as was the combined measure of dating violence (been threatened/humiliated or physically hurt by a dating partner).

The more years a woman reported being in college, the greater the odds that she experienced physically forced sexual assault. Although the odds ratio is not large (1.2), this is a continuous measure, so a single unit increase in the number of years in college is associated with a significant increase in the odds that a woman has been a victim of physically forced sexual assault since entering college. This finding is not surprising given that the more years a woman has been in college, the more exposure she has had to potentially being assaulted since entering college. However, when examining the time point at which sexual assault is most likely to happen (by restricting the analyses to sexual assaults occurring within the past 12 months), the risk is greater for sophomores than for juniors and seniors (data not shown).¹⁶

Being a Victim of AOD-Enabled Sexual Assault Only. Slightly more variables were significantly associated with experiencing AOD-enabled sexual assault than were evident in Model 1. Having been a victim of incapacitated sexual assault before entering college increased the likelihood of experiencing incapacitated sexual assault since entering college, whereas prior physically forced victimization did not.

Most of the substance use measures were significantly associated with AOD-enabled sexual assault. The frequencies with which women reported getting drunk since entering college was positively associated with being a victim of AOD-enabled sexual assault, as was marijuana use. Interestingly, voluntary use of other drugs was not a significant risk factor for any of the three categories of assault. The frequency with which women reported being drunk during sex was also associated with being a victim of AOD-enabled sexual assault. Having been given a drug without one's knowledge or consent since entering college was strongly associated with being a victim of AOD-enabled assault. The odds ratio for this measure is sizeable (2.3); however, it is important to point out that most women who were ever given a drug without their knowledge or consent were not subsequently sexually assaulted—308 women in our sample (5.3%) reported being given a drug without their knowledge or consent at some point during college, but only 31 of these women were sexually assaulted thereafter, and these women have been excluded from the current analyses, as discussed in the methods section. It may be that being given a drug without one's knowledge and being sexually assaulted are both consequences of other risk factors or risky situations in which women sometimes find themselves. Some of the same behavioral risk factors associated with sexual assault (e.g., frequency of getting drunk, using

¹⁶Freshmen were excluded from the analyses because the "past 12 month" measure could have included assaults occurring prior to entering college.

marijuana, and being drunk during sex) are also significant when the outcome of being given a drug without their knowledge is regressed on the same set of covariates (analysis not shown). The frequency with which women reported being drunk during sex since entering college is positively associated with being a victim of AOD-enabled sexual assault. Regarding the relationship between college experiences and AOD-enabled sexual assault, the frequency with which women attended fraternity parties since entering college was positively associated with being a victim of AOD-enabled sexual assault, as was having been humiliated or hurt by a dating partner. Regarding demographics, years in college was positively associated with being a victim of forced sexual assault. Also, being in the “other” race category was negatively associated with being a victim of AOD-enabled sexual assault only.

Being a Victim of Both Physically Forced and AOD-Enabled Sexual Assault. In the final model, both measures of sexual victimization prior to entering college were significantly associated with being a victim of both physically forced and AOD-enabled sexual assault during college. Also interesting is that when the individual indicators for physically forced sexual assault before college and incapacitated sexual assault before college were replaced with a single combined indicator for experienced *both* physically forced *and* incapacitated sexual assault before college, those women who experienced both types of prior victimizations (n = 109) had 5 times the odds of experienced both physically forced and AOD-enabled sexual assault during college, compared to other women (OR = 5.3, analyses not shown).

In addition, the frequency with which women reported getting drunk since entering college was positively associated with being a victim of both physically forced and AOD-enabled assault. Having been given a drug without one’s knowledge or consent since entering college was strongly associated with experiencing both types of assault, with an odds ratio of 5.1. There were no relationships between marijuana or other illicit drug use and experiencing both types of victimization, but the frequency with which women reported being drunk during sex since entering college was positively associated with being a victim of both forms of sexual assault.

The frequency with which women attended fraternity parties since entering college was positively associated with a woman experiencing both types of sexual assault, although this relationship did not quite reach significance at the 0.05 level. The number of sexual partners a woman has had since entering college was significantly associated with being in the “both” sexual assault category. In addition, having been threatened/humiliated or physically hurt by a dating partner was significantly associated with being a victim of both physically forced and AOD-enabled sexual assault. Interestingly, the dating violence measure is the only variable that maintained significance across all three assault categories. Only one demographic variable was significantly associated with experiencing both physically forced

and AOD-enabled sexual assault; being in the “other” race category was positively associated with being a victim of both physically forced and AOD-enabled sexual assault.

Not surprisingly, prior victimization was strongly associated with victimization since entering college. This pattern is supported by numerous studies in the literature. However, what is evident (and unique) about our findings is that there appears to be specificity in the relationship between prior and subsequent risk with regard to the *type* of sexual assault. Specifically, being a victim of forced sexual assault before entering college was significantly associated with being a victim of forced sexual assault since entering college but *not* AOD-enabled sexual assault, in the exclusive victimization categories. The magnitude of the odds ratio for this relationship (6.6) is extremely large—having been a victim of forced sexual assault before entering college increases the odds that a woman will be forcibly sexually assaulted while in college by almost seven times. Similarly, being a victim of AOD-enabled sexual assault before entering college was significantly associated with being a victim of AOD-enabled sexual assault but *not* physically forced sexual assault since entering college. The odds ratio (3.6) for this relationship is also large. Not surprisingly, both types of prior victimization are positively associated with experiencing *both* physically forced and AOD-enabled sexual assault during college. These findings among the exclusive forced assault and AOD-enabled assault categories clearly show that being a victim of one type of sexual assault does not seem to put one at risk for the other type, and vice versa. This is not a finding we have observed in the published literature on sexual assault.

5.1.3 Context

The CSA Study captured substantial information on the context in which the sexual assault occurred. Because a primary purpose of the CSA Study was to identify differences between physically forced sexual assault and incapacitated sexual assault on a number of dimensions (including contextual factors), we asked separate sets of contextual questions for the two types of sexual assault. Respondents who answered affirmatively to the gate questions on attempted or completed physically forced sexual assault or incapacitated sexual assault for which the respondent was certain happened or suspected happened since entering college were asked detailed follow-up questions specific to the assault type. This report only includes data for female victims of completed sexual assault (of both types). Exhibit 5-7 presents contextual factors associated with both types of sexual assault. Cross-tabulations and chi-square tests were conducted comparing the contextual characteristics of the incidents of victims of physically forced sexual assault only and victims of incapacitated sexual assault only (victims of both types of assault were excluded from these 2 x 2 analyses). For incapacitated sexual assault, the data are presented for female victims of any incapacitated sexual assault (which includes AOD-enabled sexual assault, DFSA, and other incapacitated sexual assault).

Exhibit 5-7. Percentage of Victims (by Sexual Assault [SA] Type) Reporting Various Victimization Contextual Factors, Unweighted Frequencies, Weighted Percentages^a

Contextual Factors	Forced SA Only (n = 131)		Incapacitated SA Only (n = 526)		Sig.
	n	%	n	%	
Assailant Characteristics					
More than one assailant involved	53	12.5	13	10.5	
Assailant-victim relationship					
Someone victim had never seen/talked to	30	23.3	68	11.5	***
Someone victim had seen but not talked to	6	3.1	38	7.5	†
An acquaintance	38	27.9	178	33.9	
A co-worker or employer	6	3.8	15	2.4	
A classmate/fellow student	31	21.7	139	27.1	
A professor or teaching assistant	1	2.0	1	0.1	*
A roommate	1	1.6	3	0.6	
A friend	31	24.3	193	35.4	*
A dating partner/spouse	21	17.8	89	18.3	
An ex-dating partner/ex-spouse	23	20.0	47	9.3	***
A relative	3	2.4	0	0.0	—
Some other person	4	2.5	28	4.9	
Victim was on a date with assailant	23	19.4	84	17.1	
Assailant was a fraternity member	19	14.3	152	27.5	**
Race of assailant					
White	81	57.1	441	79.9	***
Black	40	38.9	63	15.7	***
Hispanic	5	4.6	26	5.2	
Asian	4	1.7	9	2.2	
Pacific Islander	2	1.2	2	0.4	
American Indian	1	0.6	0	0.0	—
Other race	5	2.8	14	2.7	
Substance Use					
Assailant substance use ^b					
Assailant was drinking prior to incident	—	—	387	70.1	—
Assailant was using drugs	—	—	2	0.7	—
Assailant was both drinking and using drugs	—	—	56	11.5	—
Assailant was either drinking or using drugs but could not tell which	—	—	15	2.7	—
Assailant was not drinking or using drugs	—	—	35	8.4	—

(continued)

Exhibit 5-7. Percentage of Victims (by Sexual Assault [SA] Type) Reporting Various Victimization Contextual Factors, Unweighted Frequencies, Weighted Percentages^a (continued)

Contextual Factors	Forced SA Only (n = 131)		Incapacitated SA Only (n = 526)		Sig.
	n	%	n	%	
Substance Use (continued)					
Victim substance use					
Victim was drinking prior to incident	48	33.4	481	89.2	***
Victim was drunk	20	13.9	446	81.9	***
Victim voluntarily used drugs prior to incident	5	2.8	42	7.6	*
Victim given drug without knowledge/consent	n/a	n/a	19	4.2	—
Location					
At a party when incident happened	38	27.5	324	58.3	***
Incident happened on-campus	49	37.0	196	39.4	
Victim's dorm/living quarters	19	41.1	85	43.0	
Outside but near living quarters	4	12.7	11	4.1	*
Other person's living quarters	17	33.6	89	48.0	†
Classroom/lab/campus building	1	4.4	1	0.2	*
Outside	6	14.6	7	2.3	***
On-campus fraternity or sorority house	10	17.2	43	20.0	
Vehicle	3	3.7	3	0.8	
Other location on campus	4	6.6	10	4.3	
Incident happened off-campus	82	63.0	330	60.6	
Victim's living quarters	17	25.7	67	21.2	
Outside but near living quarters	2	2.3	7	1.8	
Other person's living quarters	38	46.3	164	49.4	
Off-campus fraternity or sorority house	4	3.8	25	7.3	
Other college campus	12	15.0	37	10.8	
Building off campus	4	4.1	14	4.1	
Vehicle off campus	2	3.0	5	2.3	
Away from campus	10	13.1	58	17.0	
Other location off campus	7	7.3	25	9.5	
Timing of Incidents					
Month					
January	14	9.9	54	10.3	
February	12	7.8	39	7.4	
March	15	9.1	36	6.2	
April	12	8.4	36	6.1	
May	7	4.8	30	4.8	
June	7	7.5	27	4.9	

(continued)

Exhibit 5-7. Percentage of Victims (by Sexual Assault [SA] Type) Reporting Various Victimization Contextual Factors, Unweighted Frequencies, Weighted Percentages^a (continued)

Contextual Factors	Forced SA Only (n = 131)		Incapacitated SA Only (n = 526)		Sig.
	n	%	n	%	
Timing of Incidents (continued)					
Month (continued)					
July	8	6.6	31	5.4	
August	14	11.3	41	7.0	
September	24	18.7	75	14.2	
October	23	19.5	82	16.4	
November	16	12.5	77	14.6	
December	13	10.5	63	11.6	
Day					
Monday	3	2.3	7	1.2	
Tuesday	4	3.5	18	3.1	
Wednesday	6	6.4	20	4.2	
Thursday	8	4.3	62	10.0	*
Friday	26	21.7	134	25.7	
Saturday	33	24.8	183	35.5	*
Sunday	10	8.7	15	2.7	**
Time					
Midnight-6:00 a.m.	69	51.7	473	89.9	***
6:00 a.m. to 12:00 p.m.	2	1.8	10	2.6	
12:00 p.m. to 6:00 p.m.	13	10.5	3	0.4	***
6:00 p.m. to midnight	57	44.8	64	12.6	***
Weapon Use and Injuries					
Weapon Use					
Assailant had weapon	4	5.8	4	0.9	***
Assailant claimed to have weapon	3	1.9	0	0.0	—
Assailant used weapon	1	0.6	1	0.1	
Victim sustained injuries	19	17.7	20	3.4	***
Injury from sexual contact	12	57.2	13	64.4	
Knife/stab wounds	0	0.0	1	1.7	—
Gunshot wounds	0	0.0	1	1.7	—
Internal injuries	0	0.0	1	4.2	—
Knocked unconscious, bruises, black-eye, etc.	12	61.8	8	43.8	
Chipped/knocked out teeth	1	5.0	1	1.7	
Broken bones	0	0.0	0	0.0	—

(continued)

Exhibit 5-7. Percentage of Victims (by Sexual Assault [SA] Type) Reporting Various Victimization Contextual Factors, Unweighted Frequencies, Weighted Percentages^a (continued)

Contextual Factors	Forced SA Only (n = 131)		Incapacitated SA Only (n = 526)		Sig.
	n	%	n	%	
Weapon Use and Injuries (continued)					
Victim sustained injuries (continued)	19	17.7	20	3.4	***
Emotional/psychological injury	14	79.5	11	53.3	†
Other	1	7.2	2	5.3	
Perception of any incidents as rape					
Victim considers incident(s) rape	54	40.0	130	25.3	***

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^aAs discussed in Section 3.0, for victims who reported experiencing more than one sexual assault of a single type (e.g., two or more physically forced victimizations or two or more incapacitated victimizations), the contextual questions typically asked about “any of the incidents.” Therefore, the percentages contained in this table should be interpreted as the percentage of victims (of each specific assault type) who reported the particular contextual variable in the table, rather than the % of incidents for which the contextual variable was present.

^bData unavailable due to programming error during survey administration.

Assailant Characteristics

The first set of contextual variables pertain to characteristics of the assailant. As shown in the exhibit, less than 15% of physically forced and incapacitated victims were assaulted by more than one person; however, the groups did not differ significantly. Regarding the relationship between the victim and the assailant and keeping in mind that respondents could select more than one category for this question, it is evident that a small proportion of victims reported being assaulted by someone they had never seen or talked to before. Victims of physically forced sexual assault were much more likely than incapacitated assault victims to be assaulted by someone they had never seen or talked to (23% vs. 12%, respectively), or by a former intimate partner (20% vs. 9%, respectively). A higher percentage of incapacitated sexual assault victims were victimized by a friend. This assailant-victim relationship was reported most often by incapacitated assault victims.

Interestingly, over a quarter of incapacitated sexual assault victims reported that the assailant was a fraternity member at the time of the incident; this proportion is significantly higher than that reported by victims of physically forced sexual assault (28% vs. 14%, respectively). Also of interest is that a significantly higher proportion of incapacitated sexual assault victims (80%) than physically forced sexual assault victims (57%) reported that the assailant was white. In contrast, a much higher percentage of physically forced victims (39%) reported that the assailant was black, compared to incapacitated victims (16%).

Substance Use

The vast majority of incapacitated sexual assault victims reported that the assailant had been drinking and/or using drugs before the incident.¹⁷ Differences in substance use on the part of the victim by assault type are evident in the table. Not surprisingly, the vast majority of incapacitated sexual assault victims (89%) reported drinking alcohol, and being drunk (82%), prior to their victimization. This is much higher than the proportion of physically forced victims who reported drinking (33%) and being drunk (13%) prior to their assault. Drug use was relatively low among both groups, although a slightly higher proportion of incapacitated sexual assault victims reported having voluntarily used drugs before the incident (8% vs. 2%). For victims of either type of sexual assault who reported voluntary drug use, the most commonly used drugs were marijuana, cocaine, methamphetamine, and ecstasy.

Only victims reporting incapacitated sexual assault were asked whether they had been given a drug without their knowledge or consent immediately before the assault. A low proportion of incapacitated sexual assault only victims (4%) reported such coercive drug ingestion. Of these victims, the drugs reportedly used to incapacitate them were Rohypnol, GHB, marijuana, and ecstasy, although it is worth noting that over half of incapacitated sexual assault victims who reported coercive drug ingestion stated that they did not know which drug they were given.

Location

A surprisingly large number of respondents reported that they were at a party when the incident happened, with a significantly larger proportion of incapacitated sexual assault victims reporting this setting (58% compared with 28%). The majority of sexual assault victims of both types reported that the incident had happened off campus (61% of incapacitated sexual assault victims and 63% of physically forced sexual assault victims). A higher proportion of physically forced than incapacitated sexual assaults occurred outside. The most commonly-reported locations of either type of victimization, on and off-campus, were the victim's or some other person's living quarters. No other significant differences by assault type are evident.

Timing of Incidents

Substantial variability in the time of year in which sexual assault incidents took place is evident, with fall clearly being the most prevalent season for sexual assault. The largest proportion of victims (of both types of sexual assault) reported being victimized in October (20% of physically forced sexual assault victims and 16% of incapacitated sexual assault victims). Not surprisingly, the vast majority of victims reported being victimized on

¹⁷Unfortunately, the percentage of physically forced sexual assault victims who reported assailant alcohol and/or drug use cannot be determined, because of an error in the survey program that saved all responses as either "drinking only" or "don't know."

Saturday (25% of physically forced sexual assault victims and 36% of incapacitated sexual assault victims) or Friday (22% of physically forced sexual assault victims and 26% of incapacitated sexual assault victims). Also not surprising is that the majority of victims reported being assaulted during the hours from midnight to 6:00 a.m.; the prevalence of this is significantly higher among incapacitated assault victims. However, although victims of both types are most likely to be assaulted from midnight to 6:00 a.m., a significantly higher proportion of physically forced victims are assaulted during earlier hours (noon to 6:00 p.m. and 6:00 p.m. to midnight). Forty-five percent of physically forced victims, compared to 13% of incapacitated victims, reported being assaulted between 6:00 p.m. and midnight.

Weapon Use and Injuries

Very few victims of either type of sexual assault reported that the assailant had or claimed to have a weapon. The proportion reporting assailant weapon possession was higher for victims of physically forced sexual assault than incapacitated sexual assault. The proportion of victims reporting that they had sustained injuries in the assault is relatively low, although, not surprisingly, a greater proportion of physically forced sexual assault victims (18%) reported being injured than incapacitated sexual assault victims (3%). Among those who sustained injuries, the most prevalent were emotional or psychological injury;¹⁸ injury from the sexual contact; and bruises, black-eyes, cuts, scratches, or swelling.¹⁹

Perception of Any Incidents as Rape

When asked if they considered the incident to be rape, a significantly higher percentage of physically forced victims (40%) answered affirmatively, compared to only 25% of the incapacitated assault victims. Because our classification of sexual assault includes both battery (unwanted touching achieved by physical force or incapacitation of the victim) and rape (vaginal, oral, anal, or object penetration achieved by physical force or incapacitation of the victim), not all victims were indeed raped. When subsetting to victims who were

¹⁸Although a large proportion of victims reported experiencing emotional or psychological injury, we anticipate that in reality, the number is substantially larger. If the gate question used to identify victims sustaining an injury had specifically referred to emotional or psychological injury, we suspect that many more victims would have answered affirmatively and then selected emotional or psychological injury in the follow-up question that asked specifically about the types of injuries sustained.

¹⁹Exhibit 5-7 includes “knocked unconscious” in the same category as “bruises, black-eye, cuts, scratches, or swelling” because of a programming error in the follow-up responses to physically forced sexual assault incidents, in which the responses to the “bruises, etc.” were saved with “knocked unconscious.” Based on the responses to incapacitated sexual assault (in which the two sets of responses were saved in the appropriate category, with only 3 respondents reporting being knocked unconscious and 22 reporting experiencing bruises, etc.), we can deduce that very few physically forced sexual assault victims were knocked unconscious and that most of the victims experienced the latter type of injury (i.e., bruises, black-eyes, cuts, scratches, or swelling).

raped, 64.6% of physically forced rape victims and 37.8% of incapacitated rape victims considered the incident to be rape.²⁰

5.1.4 Reporting and Nonreporting

Victims of both types of sexual assault were asked detailed sets of questions about informal and formal reporting of the event. Their responses were compared using chi-square tests. The reporting data are presented in Exhibit 5-8.

Family Member or Friend

The first category of disclosure pertains to someone close to the victim. The majority of victims of both types of assault reported that they told someone such as a family member, friend, roommate, or intimate partner. A slightly higher proportion of physically forced sexual assault victims (70%) than incapacitated sexual assault victims (64%) reported this type of disclosure, although these percentages were not significantly different.

Victim's, Crisis, or Health Care Center

A very small percentage of victims reported that they contacted a victim's, crisis, or health care center after the incident. Once again, this type of disclosure was more prevalent among physically forced sexual assault victims (16%) than incapacitated sexual assault victims (8%). Because of the small number of victims who reported contacting this type of service agency, the data on follow-up questions pertaining to this experience should be interpreted with caution. A significantly higher percentage of physically forced victims reported to a crisis center or victim's services program, or counselor or therapist not affiliated with their university. Although physically forced sexual assault victims were most likely to contact a counselor or therapist not affiliated with the university, incapacitated sexual assault victims were most likely to contact a doctor's office or medical facility affiliated with the university. Just over three-fourths of physically forced sexual assault victims who contacted a victim's, crisis, or health care center reported receiving a physical or sexual assault examination, and just half of incapacitated sexual assault victims reported receiving such an examination. Most commonly, victims of physically forced sexual assault contacted a victim's, crisis, or health care center after 24 hours but within 1 week of the incident.²¹ The vast majority of victims who contacted a victim's, crisis, or health care center were satisfied with the way their reporting was handled, but a few regretted that they reported the incident to this type of center. Slightly more victims of incapacitated sexual assault stated that they were satisfied with the way their reporting was handled, and

²⁰The proportion of sexual assault or rape victims who reported that they consider the incident to be rape is difficult to interpret for victims reporting more than one incident of a type because these victims were asked whether they considered any of the incidents to be rape.

²¹The time period of contact for incapacitated sexual assault victims cannot be determined because of a programming error.

fewer stated that they regret reporting the incident to a victim's, crisis, or health care center.

Exhibit 5-8. Reporting of Sexual Assault (SA), by Assault Type, Unweighted Frequencies, Weighted Percentages^a

Reporting Variables	Forced SA Only (n = 131)		Incapacitated SA Only (n = 526)		Sig.
	N	%	N	%	
Family or Friends					
Disclosed incident to someone close	91	68.9	350	63.7	
Victim's, Crisis, or Health Care Center					
Contacted a victim's, crisis, or health care center	20	15.8	35	7.5	**
Crisis center or victim services program affiliated with the university	5	25.8	6	22.6	
Crisis center or victim services program not affiliated with the university	6	32.6	3	7.0	*
Doctor's office or medical facility affiliated with the university	3	15.1	12	33.0	
Doctor's office or medical facility not affiliated with the university	8	43.2	9	22.0	†
Counselor or therapist affiliated with the university	7	35.4	7	33.3	
Counselor or therapist not affiliated with the university	10	44.2	4	10.2	**
Women's program or service	6	27.7	7	17.4	
Given a physical or sexual assault examination	15	77.9	16	51.0	*
Time period of contact ^b					
Less than 3 hours after incident	3	11.8	—	—	—
Within 3 to 24 hours	2	12.3	—	—	—
Within 1 week	10	54.0	—	—	—
Within 1 month	3	13.0	—	—	—
More than 1 month after incident	2	9.0	—	—	—
Satisfaction with reporting					
Satisfied with the way reporting was handled	12	70.3	29	83.6	
Regret reporting the incident	3	11.4	1	0.8	
Law Enforcement					
Reported incident to the police or campus security	18	12.9	9	2.1	***
Campus police or campus security	5	24.9	7	85.3	**
Municipal/local/city police/911	10	51.1	4	50.9	
County sheriff	1	5.5	0	0.0	
State police	0	0.0	0	0.0	

Other law enforcement	6	35.4	0	0.0
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(continued)

Exhibit 5-8. Reporting of Sexual Assault (SA), by Assault Type, Unweighted Frequencies, Weighted Percentages^a (continued)

Reporting Variables	Forced SA Only (n = 131)		Incapacitated SA Only (n = 526)		Sig.
	N	%	N	%	
Law Enforcement (continued)					
Time period of contact					
Less than 3 hours after incident	4	27.1	3	21.6	
Within 3 to 24 hours	1	5.5	4	52.7	*
Within 1 week	6	22.6	1	9.4	
Within 1 month	1	5.5	0	0.0	
More than 1 month after incident	4	20.8	1	16.3	
Satisfaction with reporting					
Satisfied with the way reporting was handled ^b	6	32.1	—	—	—
Regret reporting the incident	4	17.2	1	7.2	
Reasons for not reporting to law enforcement					
Did not want anyone to know	45	41.7	143	28.6	**
Afraid of reprisal by the assailant	18	17.9	55	11.7	†
Did not think it was serious enough to report	69	55.6	350	66.5	*
Unclear that it was a crime or that harm was intended	43	36.8	188	35.9	
Did not have proof that the incident happened	26	23.3	79	14.9	*
Did not know how to report it	13	14.1	40	7.4	*
Did not think the police would think it was serious enough	22	20.6	58	11.9	*
Fear of being treated poorly by police or other parts of the justice system	13	13.6	24	5.6	**
Did not think anything could be done to the assailant	23	24.0	40	7.5	***
Did not want anyone to know about alcohol or drug use	8	7.5	53	10.7	
Did not remember/know what really happened	n/a	n/a	173	31.1	—
Victim thought she was partially/fully responsible	n/a	n/a	260	49.8	—
Other reason	20	16.9	75	15.2	

(continued)

Exhibit 5-8. Reporting of Sexual Assault (SA), by Assault Type, Unweighted Frequencies, Weighted Percentages^a (continued)

Reporting Variables	Forced SA Only (n = 131)		Incapacitated SA Only (n = 526)		Sig.
	N	%	N	%	
Testing for DFSA					
Blood/urine sample taken	n/a	n/a	3	10.5	—
Results positive for drugs	n/a	n/a	1	75.4	—

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^aAs discussed in Section 3.0, for victims who reported experiencing more than one sexual assault of a single type (e.g., two or more physically forced victimizations or two or more incapacitated victimizations), the contextual questions typically asked about “any of the incidents.” Therefore, the percentages contained in this table should be interpreted as the percentage of victims (of each specific assault type) who reported the particular contextual variable in the table, rather than the % of incidents for which the contextual variable was present.

^bData unavailable due to programming error during survey administration.

Law Enforcement

A similarly small proportion of victims of both types stated that they reported the incident to a law enforcement agency, with incapacitated sexual assault victims once again being less likely to report the incident to this type of agency (2% vs. 13%). However, of victims who reported to law enforcement, a much higher proportion of incapacitated assault victims, compared to physically forced assault victims, reported to campus police (86% vs. 25%, respectively). The majority of incapacitated sexual assault victims contacted law enforcement within 24 hours of the incident, whereas large proportions of physically forced victims reported within 3 hours (27%), within one week (23%), and more than one month after the incident (21%). Less than half of physically forced sexual assault victims stated that they were satisfied with the way their reporting to law enforcement was handled,²² and 17% stated that they regretted reporting the incident to law enforcement.

The victims who did not report the incident to law enforcement were asked why they made this decision. The most commonly reported response by both types of victims was that they did not think it was serious enough to report (reported by 56% of physically forced sexual assault victims and 67% of incapacitated sexual assault victims). The other consistently reported reasons for not reporting were that it was unclear that a crime was committed or that harm was intended (selected by just over 35% of both types of victims), and that they did not want anyone to know about the incident (selected by 42% of physically forced sexual assault victims and 29% of incapacitated sexual assault victims). Relatively large

²²The proportion of incapacitated sexual assault victims cannot be determined because of a programming error.

proportions of incapacitated sexual assault victims stated that they did not report the incident because they thought they were partially or fully responsible (50%) and that they did not remember or know what really happened (31%). These response options were only provided as options for incapacitated sexual assault victims.

Testing for DFSA

In the reporting section of the interview, victims of incapacitated sexual assault were asked whether anyone to whom they had reported the incident took a blood or urine sample from them. Only three of the women who experienced incapacitated sexual assault only had a blood or urine sample drawn. Of those three women, one's results were positive. If we look at all victims of incapacitated sexual assault, regardless of if they also experienced physically forced sexual assault, seven of these incapacitated sexual assault victims had blood or urine samples taken. Three of these victims reported that the results of the test was positive, with all three drug tests indicating the presence of Rohypnol.

5.1.5 Consequences

Finally, sexual assault victims of both types were asked about actions they took as a result of the incident and consequences received by the assailant. As shown in Exhibit 5-9, for the most part victims of both types did not report taking the actions about which the instrument asked. Beyond avoiding or trying to avoid the assailant (reported by about two-thirds of victims of both sexual assault types), the respondents were unlikely to report action stemming from the assault. Twenty-two percent of physically forced sexual assault victims and 6% of incapacitated sexual assault victims reported that they sought psychological counseling, a statistically significant difference.

Not surprisingly, given the very low percentage of victims who reported the incident to law enforcement, a very small number of victims of either type reported that they pursued any action against the assailant, including seeking a restraining order, filing civil charges, pursuing criminal charges, or filing a grievance or initiating other disciplinary action with university officials. However, a slightly higher proportion of physically forced victims reported pursuing criminal charges. A very small number of victims reported that the assailant received any disciplinary action from the university or that the assailant was arrested, prosecuted, or convicted by the criminal justice system, but a higher percentage of physically forced victims reported this latter outcome.

Exhibit 5-9. Consequences of Sexual Assault (SA), by Assault Type, Unweighted Frequencies, Weighted Percentages^a

	Forced SA Only (n = 131)		Incapacitated SA Only (n = 526)		
	N	%	N	%	Sig.
Victim Actions					
Avoided/trying to avoid assailant	93	67.4	327	61.9	
Dropped a class	10	8.3	9	1.8	***
Changed majors	3	1.2	5	0.8	
Changed universities	5	3.1	9	1.5	
Moved residence	14	11.5	8	1.5	***
Quit job	5	3.5	1	0.2	**
Sought psychological counseling	29	22.1	24	5.6	***
Sought a restraining order	8	7.2	0	0.0	—
Filed civil charges	1	1.6	0	0.0	—
Pursued criminal charges	9	5.8	1	0.2	***
Filed a grievance or initiated other disciplinary action with university officials	1	0.6	1	0.2	
Other	23	16.0	62	11.8	
Assailant Consequences					
Received disciplinary action from the university	1	0.6	4	0.8	
Arrested, prosecuted, or convicted by criminal justice system	6	5.7	1	0.4	***

† $p < 0.10$, * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

^aAs discussed in Section 3.0, for victims who reported experiencing more than one sexual assault of a single type (e.g., two or more physically forced victimizations or two or more incapacitated victimizations), the contextual questions typically asked about “any of the incidents.” Therefore, the percentages contained in this table should be interpreted as the percentage of victims (of each specific assault type) who reported the particular contextual variable in the table, rather than the % of incidents for which the contextual variable was present.

5.2 Sexual Assault Perpetration

As an exploratory component of the CSA Study, we asked the sample of 1,375 male undergraduates at the two participating universities whether they perpetrated sexual assault since entering college. The perpetration questions were worded similarly to the victimization items presented previously. Although 19% ($n = 1,073$) of the sample of undergraduate women reported experiencing some type of attempted or completed sexual assault since entering college, only 2.5% ($n = 34$) of the male undergraduate sample reported perpetrating any type of sexual assault, either completed or attempted. Approximately 1.8% ($n = 25$) of males reported perpetrating a completed sexual assault

since entering college. All but one of these cases were perpetrators of incapacitated sexual assault ($n = 24$). A slightly higher number of males reported perpetrating either completed or attempted incapacitated sexual assault ($n = 33$, 2.4%).

When subsetting to the perpetrators of completed incapacitated sexual assault, 29% ($n = 6$) of perpetrators were on a date with the victim at the time of the incident. Twenty-nine percent of these perpetrators ($n = 7$) reported that the victim was a member of a sorority. None of the perpetrators reported giving the victim a drug without her consent. Over three-quarters of the perpetrators ($n = 21$, 86.2%) reported that the victim was drinking before the incident, and 81.0% of perpetrators had been drinking before the incident. Ninety-four percent of those who had been drinking reported that they were drunk before the sexual assault incident occurred. None of the perpetrators of incapacitated sexual assault, whether penetration of the victim occurred or not, considered the incident to be rape.

We have concerns about the validity of the perpetration data. We suspect that some males who have perhaps perpetrated sexual assault since entering college consciously answered our survey questions about perpetration negatively and untruthfully. We also believe, however, that some males answered our questions negatively and honestly in that they do not believe what they did fit the descriptions we used in our questions. Their accounts of what happened may differ considerably from that of the self-identified victim. This is not to say they were not perpetrators, but it helps explain why our self-reported perpetration rates are so much lower than our self-reported rates of sexual assault victimization. Other possible explanations for the discrepancy between the percentage of women who reported being victimized and the percentage of men who reported perpetrating sexual assaults include: (1) the men who participated in the CSA survey were significantly less likely to be perpetrators of sexual assault than men who did not participate in the CSA survey, and (2) relatively few men sexually assault women, but those who do sexually assault many women, which results in there being relatively few perpetrators and many victims.

6. CONCLUSION AND RECOMMENDATIONS

6.1 Summary of Findings

One of the primary purposes of the CSA Study was to determine the prevalence of various types of sexual assault. Of particular interest was the prevalence of DFSA. It is quite clear that a sizeable proportion of undergraduate women (11.1%) have experienced sexual assault when they were incapacitated and unable to provide consent, but the large majority of these victims had not been given a drug without their knowledge prior to the assault. The large majority ($n = 566$, 84%) of the 651 women who experienced incapacitated sexual assault were victims of AOD-enabled, rather than drug-facilitated, sexual assault. Only 31 (0.6%) of the 5,446 undergraduate women who participated in the CSA Study reported being sexually assaulted after being given a drug without their knowledge or consent since entering college. There are no estimates in the literature to which this figure can be compared, but given the attention that DFSA and “date rape drugs” have received in the media in recent years, this estimate is almost certainly lower than some might have expected. Clearly, undergraduate women are at much greater risk of sexual assault that occurs in the context of voluntary consumption of alcohol and/or drugs or that is physically forced than sexual assault that is drug facilitated.

The phenomenon of being given a drug without one’s knowledge is, however, not necessarily rare among our sample. A total of 308 women in our sample of 5,446 (5.3%) reported being given a drug without their knowledge or consent since entering college and the drugs most likely to be administered were Rohypnol and GHB, which are commonly referred to as date rape drugs. Women being given a drug without their knowledge or consent appears to be a legitimate concern for universities and students, but it is unclear whether widespread concerns about DFSA can be justified empirically.

Another interesting finding generated by the CSA Study is that the prevalence of experiencing sexual assault is higher since entering college (13.7%) than before entering college (11.3%). However, our survey was done at a single point in time and during a time period when collegiate experiences are more salient, so it may be that subjects had difficulty recalling sexual assaults that occurred before entering college. On the other hand, it is important to point out that our “since entering college” estimates do not reflect the sample’s entire collegiate experience because the sample includes freshman, sophomores, and juniors (and even seniors had not completed their senior year), which means that the true rate of sexual assault during the entire college experience is likely higher. When subsetting to seniors, the data show that 368 women (26.1% of seniors) reported experiencing attempted or completed sexual assault since entering college. Ninety-two (7.0%) seniors were victims of physically forced sexual assault since entering college, and 223 (16.0%) seniors were victims of incapacitated sexual assault since entering college. It is important to note, however, that although the cumulative prevalence estimates of sexual

assault are understandably highest for seniors, the “past 12 month” prevalence estimates of sexual assault are highest among sophomores.²³ This pattern indicates that women who are victimized during college are most likely to be victimized early on in their college tenure. This finding is consistent with a recent study employing a convenience sample of university women, which found that 84% of the women who reported sexually coercive situations experienced the incident during their first four semesters on campus (Gross, Winslett, Roberts, & Gohm, 2006).

Not surprisingly, the CSA Study found that the prevalence of sexual assault among male college students was considerably lower than similar estimates for women. A total of 50 males (3.7%) reported being victims of completed sexual assault since entering college. The majority of these victims (90.2%) were victims of incapacitated sexual assault. Estimates of the sexual victimization of adult males are sparse in the literature, so it is difficult to compare the CSA Study findings to those produced by existing research.

Our multivariate analyses identifying risk factors for sexual assault among university women indicate that several factors are differentially associated with specific types of sexual assault. Specifically, compared to whites, Hispanic women were more likely to be victims of physically forced sexual assault. Years in college and the number of dating partners were both positively associated with experiencing physically forced sexual assault and experiencing physically forced and AOD-enabled sexual assault. Victims of AOD-enabled assault and both types of assault more frequently attended fraternity parties, got drunk, had ever been given a drug without their consent, and were frequently drunk during sex since entering college. Victims of AOD-enabled sexual assault only were more likely to have used marijuana. In contrast, none of these risk factors were significantly associated with being a victim of forced sexual assault. Ever having been threatened, humiliated, or physically hurt by a dating partner was a risk factor for all three measures of sexual assault. Interestingly, having been a victim of forced sexual assault before entering college was a risk factor for being a victim of forced (but not AOD-enabled) sexual assault since entering college, and having been a victim of incapacitated sexual before entering college was a risk factor for being a victim of AOD-enabled (but not forced) sexual assault since entering college. Other studies have found that previous victimization is a risk factor for future victimization, but this is the first study we are aware of that has determine that being a victim of a certain type of sexual assault puts one at risk of being a victim of that type of sexual assault, and not necessarily another type of sexual assault. In other words, the risk posed by previous victimization is specific to the type of victimization experienced.

Descriptive analyses of the context, consequences, and reporting of sexual assault also confirm that differences exist between forced and incapacitated sexual assault. For example,

²³While the “past 12 month” prevalence is also high among freshmen, they were excluded from these comparisons of sexual assault prevalence because they had not experienced 12 months of college.

forced sexual assaults were more likely to involve a black perpetrator, whereas incapacitated sexual assaults were more likely to involve a white perpetrator. Forced assaults were also more likely to be perpetrated by a stranger to the victim or an ex-dating partner or ex-spouse, whereas incapacitated sexual assaults were more likely to be perpetrated by a friend or acquaintance of the victim. Additionally, more than a quarter of incapacitated sexual assault victims were victimized by a member of a fraternity. Not surprisingly, victims of incapacitated sexual assault were considerably more likely to have been using alcohol before and be drunk during the assault. Incapacitated assaults were more likely to happen at a party and between midnight and 6 a.m., whereas forced sexual assaults were more likely to happen between noon and midnight. Victims of forced sexual assault were more likely to be injured and to consider the incident to be rape.

Victims of forced sexual assault were more likely to report the assault to friends or family, crisis centers, and law enforcement, but they were also less satisfied with how the report was handled and more likely to regret reporting the assault than incapacitated sexual assault victims who reported their assaults. Overall, victims of forced sexual assault were also more likely to make changes in their lives in reaction to the assault, such as dropping a class, moving, and changing majors, and were more likely to seek psychological counseling as a result of the victimization.

6.2 CSA Study Implications

Sexual assault is clearly an issue in need of attention by the campus community given its high prevalence and adverse consequences, and the CSA Study results carry many social and policy-oriented implications. One out of five undergraduate women experience an attempted or completed sexual assault since entering college. Moreover, attention must be paid to the following facts:

- the majority of sexual assaults occur when women are incapacitated due to their use of substances, primarily alcohol;
- freshmen and sophomores are at greater risk for victimization than juniors and seniors; and
- the large majority of victims of sexual assault are victimized by men they know and trust, rather than strangers.

It is thus critical that sexual assault prevention strategies and messages be designed such that undergraduates are educated (and as soon after enrollment as possible) about these facts. Most importantly, because most sexual assaults experienced by university women are enabled by alcohol or other drugs, one clear implication is the need to address the risks of substance use, particularly the risk of drinking to excess, in sexual assault prevention messages presented to university students. For many students, college offers an environment notorious for encouraging excessive drinking and experimenting with drugs. Most students are simply unable to gauge the amount of alcohol consumed, are unaware of

the effects of new drugs or the mixing of drugs and alcohol, and are unfamiliar with the point at which their cognitive ability is so impaired that they cannot protect themselves. Students may also be unaware of the image of vulnerability projected by a visibly intoxicated individual. Despite the link between substance use and sexual assault, it appears that few sexual assault prevention and/or risk reduction programs address the relationship between substance use and sexual assault. In a review of 15 university-based prevention interventions conducted between 1994 and 1999, only three included references to alcohol use (Bachar & Koss, 2001).

Another important implication stems from our finding of DFSA being an extremely rare occurrence. Universities should continue to be mindful of this phenomenon and educate students about the potential dangers and consequences of clandestinely giving someone a drug or being given a drug. However, an overemphasis on DFSA takes attention away from the true nature of campus sexual assault, ignoring the fact that most sexual assaults occur after voluntary alcohol consumption by the victim and assailant. Universities must address the dangers of voluntary alcohol consumption rather than focusing on the rare phenomenon of coercive drug ingestion.

Finally, the very low rates of reporting sexual assault to crisis centers and law enforcement suggest that perhaps more can be done to encourage reporting. When reports of sexual assault are handled properly and effectively, the process can be important to the recovery and healing of the victim, as well as the identification, punishment, and deterrence of perpetration. Universities and law enforcement should thus seek out and implement strategies that encourage reporting of sexual assault and ensure reports of sexual assault are being handled properly. The fact that a large proportion of sexual assault victims had been drinking before the incident may particularly discourage reporting, given victim concerns about reprisal for violating campus policies on drug and alcohol use. Other studies have suggested that university administrators believe policies allowing for confidential and anonymous reporting encourage reporting (Karjane, Fisher, & Cullen, 2005).

In addition, even though some women experience their first sexual assault after entering college, many women who experience sexual assault during college had been sexually victimized before coming to college. Since women who have experienced sexual assault before entering college have a much greater chance of experiencing sexual assault during college, it is important that sexual assault programming reflects this reality. Programs should focus on both primary prevention for women who have not experienced sexual assault and secondary prevention in an effort to prevent re-victimization (although more research is needed to guide the development of effective secondary prevention programming).

Sexual assault prevention programs for women could involve:

- Providing accurate information on legal definitions of sexual assault, the extent and nature of sexual assault among college women, and risk factors for sexual assault (e.g., risky sexual behaviors, multiple sex partners, the role of substances);
- Combining sexual assault prevention education with alcohol and drug education programming (e.g., education concerning how levels of alcohol consumption and use of different drugs, and their interactions, affect cognitive functions; harm reduction messages; education about the impact of alcohol and drug use, especially heavy episodic drinking, has on cognitive functions, which reduces one's ability to detect dangerous cues and threats, and one's ability to effectively resist unwanted advances that can arise in common college social situations);
- Stressing that even though many sexual assaults involves substance use by the victim, this does not imply that women are to blame for their sexual assault. Victimization is committed by the perpetrator, and therefore the sole responsibility for the assault lies with the perpetrator;
- Educating women about different types of sexual assault, especially since there appears to be continuity in the type of sexual assault experienced over time (physically forced or incapacitated sexual assault);
- Teaching effective sexual assault resistance strategies to reduce harm, particularly with respect to strategies for protection from men that women know and trust;
- Educating women about how to increase their assertiveness and self-efficacy;
- Conveying knowledge about how to report to police or school officials, the availability of different types of services on and off campus;
- Stressing the importance of reporting incidents of attempted and completed sexual assault to mental and/or physically health service providers and security/law enforcement personnel, and the importance to seeking services, especially given the well-documented negative impacts sexual assault can have on psychological and physical functioning.

Programs for men to prevent sexual assault perpetration could include:

- Providing accurate information on legal definitions of and legal penalties for sexual assault;
- Informing men that they are ultimately responsible for determining (1) whether or not a women has consented to sexual contact, and (2) whether or not a women is capable of providing consent; and
- Educating men that an intoxicated person cannot legally consent to sexual contact and that having sexual contact with an intoxicated or incapacitated person is unacceptable.

All of these prevention programs should be tailored to include risk factors that both college women and men encounter in common college social interactions/situations. Moreover, the programs should be designed as continuing educational curriculums rather than brief, "one shot" doses since research suggests that the former approach is more helpful.

6.3 CSA Study Limitations

Although the CSA Study methodology was effective and efficient, and generated many interesting and useful findings, the study is not without limitations. First, the data are cross-sectional in nature, which precludes us from knowing exactly how concepts relate to each other temporally, particularly with respect to “risk factors” for sexual assault. For example, it appears that the frequency with which undergraduate women get drunk is associated with their risk for being victims of sexual assault; however, it is possible that victims of sexual assault increase the frequency with which they got drunk as a result of the victimization, in which case frequency of getting drunk is not a risk factor for, but a consequence of, being sexually assaulted.

Another limitation of the CSA Study, inherent with Web-based surveys, is that the response rates were relatively low. Although the response rates were not lower than what most Web-based surveys achieve, they are lower than what we typically achieve using a different mode of data collection (e.g., face-to face-interviewing). However, other modes of data collection are considerably more expensive and time consuming. Additionally, other modes would not have given respondents the same degree of anonymity and privacy and thus could have reduced data quality. Therefore, we feel that the trade-offs associated with low response rates are in many ways overcome by the benefits of cost-efficiency and data quality (in terms of respondent anonymity and privacy, which are associated with more accurate reporting of sensitive behaviors). In addition, it is important to note that the nonresponse bias analyses that have been conducted to date have been encouraging and that we were able to weight the data to adjust for the observed nonresponse bias. It is also encouraging that the sexual assault prevalence rates generated from this study are consistent with data from other university-based studies on sexual assault.

A third limitation of the CSA Study, or at least a shortcoming worth pointing out, relates to the data we attempted to collect from males on sexual assault victimization and perpetration. The response rates for males were disappointingly low, which creates concerns regarding the external validity of the data. Furthermore, the self-reported rates of sexual assault perpetration were extremely low (particularly when compared with the limited previous studies that have explored self-reported perpetration among university men), which makes us seriously doubt the validity of these data. Several explanations for the extremely low self-reported rate of sexual assault perpetration exist. First, perhaps perpetrators were much less likely than nonperpetrators to participate in the survey, which would result in artificially deflated estimates. Second, among the males who did participate in the survey, it is certainly possible that some did not respond honestly to the questions about sexual assault. Actual perpetrators may not have believed the answers they provided would remain anonymous and believed they might face serious consequences associated with reporting their criminal behavior. This possibility is somewhat discouraging. Given that the CSA Study methodology afforded respondents an exceptional amount of privacy and

anonymity, the perpetration data cast some doubt on whether researchers can credibly collect data on perpetration of sexual assault via any methodology. Finally, although we used parallel wording for the victimization and perpetration questions, it is possible that men and women view certain sexual encounters differently. A woman might answer affirmatively to a question asking about whether she had experienced a particular type of unwanted sexual contact because someone used physical force or because she was incapacitated and unable to provide consent. In contrast, a man may view the same encounter as consensual and answer negatively to a question asking whether he has had sexual contact with someone by using physical force or when the person was incapacitated and unable to provide consent.

It is also unclear whether the male data on victimization are accurate, because there is such limited prior research with which to compare the estimates. Given that the male component of the CSA Study was exploratory, we believe it was a worthwhile endeavor, but it is unclear whether we can draw any meaningful conclusions from the data collected from undergraduate males.

6.4 Conclusion

The CSA Study generated many useful data on sexual assault that have not previously been presented in the literature. Sexual assault is a serious social, public safety, and public health problem that affects men and women across the country. University students may be at increased risk for sexual assault, particularly certain types of sexual assault. The CSA Study data suggest women at universities are at considerable risk for experiencing sexual assault, especially AOD-enabled sexual assault, and that a number of personal and behavioral factors are associated with increased risk. Universities may be able to take several steps to reduce the prevalence of sexual assault, as well as improve the resources for and response to sexual assault victims, by

- better educating males and females about what constitutes sexual assault, how prevalent it is, when it is most likely to happen, and subgroups who may be at greatest risk;
- including information about the use and abuse of alcohol and how it can increase one's risk for sexual assault in all prevention and education messages;
- making sure all students are aware of the various resources available on and off campus to victims of sexual assault;
- ensuring that crisis centers and law enforcement have appropriate protocols and staff in place to deal with victims of sexual assault; and
- educating students about what they should do if they witness a sexual assault, experience a sexual assault, or have a friend who is sexually victimized.

7. FUTURE DIRECTIONS

Several additional steps are planned for the CSA Study. Once the analyses on sexual assault victimization have been completed, we plan to use the CSA data for a variety of supplemental analyses. Specifically, we plan to explore in more detail the data on dating violence, examining gender differences in dating violence victimization and perpetration (both emotional and physical) and identifying risk factors for dating violence among our university sample. In addition, we anticipate that the participating universities will be particularly interested in the data on attitudes toward sexual assault. Therefore, we plan to identify particular subgroups of students (both male and female) who might be appropriate targets for sexual assault prevention programming. Finally, we plan to fully explore the data on substance use, once again for the purpose of informing prevention programs at the participating universities.

Beyond further analyses of the existing CSA Study data, we have identified several key future directions for our research. First, we feel that the successful implementation of the methodology pioneered for the CSA Study justifies the expansion of the CSA Study to additional universities. It would be of substantial value to field the CSA Study at universities in other regions of the country, as well as other types of universities, such as private universities (or colleges) or historically black colleges and universities (HBCUs). The low cost and significant efficiency of the CSA Study methodology would make the replication at additional universities extremely feasible for minimal investment. Second, we plan to use the survey data to assist in developing sexual assault prevention programming at the participating universities. We have begun preliminary prevention discussions with key officials at the universities and intend to further contribute to prevention messages that are grounded in empirical data reflecting actual experiences with sexual assault at the participating universities. We are also interested in evaluating the prevention interventions developed and implemented as a result of the CSA Study.

This document is a research report submitted to the U.S. Department of Justice. This report has not been published by the Department. Opinions or points of view expressed are those of the author(s) and do not necessarily reflect the official position or policies of the U.S. Department of Justice.

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