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An Examination of the Prevalence and Predictors of Drugging Victimization and Drugging Perpetration in a National Sample

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AN EXAMINATION OF THE PREVALENCE AND PREDICTORS OF DRUGGING
VICTIMIZATION AND DRUGGING PERPETRATION IN A NATIONAL SAMPLE

by

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DEDICATION

For my family – my mother, father, sister, granny, and grandparents who have passed on. You all have believed in me and encouraged my dreams and aspirations.

Thank you for always expressing your unconditional pride in me. For Hannah, who laid by my side through all of the long nights and early mornings and offering unconditional support and comfort that got me to this point. For Dash, who made me laugh when I needed it most.

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Again, thank you to my family for encouraging me and making me who I am.

ABSTRACT

Objective: The current study sought to expand the understanding of the nascent phenomenon of drugging, the administering of a drug or alcohol substance to an individual without their knowledge or consent (Swan et al., 2017). Specifically, in this paper, the lifestyle-routine activities theory (L-RAT) is used as a framework to examine what factors may contribute to the occurrence of drugging. Prevalence rates of drugging victimization and drugging perpetration are examined by participant characteristics including gender, sexual orientation, and race/ethnicity, and by risk behaviors including illicit drug use, marijuana use, and binge drinking. Trait sensation seeking, which has been shown to increase people's likelihood of engaging in risk behaviors and to be higher in men than women, is examined as a mediator of the relationships between gender and drugging victimization and perpetration as well as between risk behaviors and drugging victimization and perpetration. **Method:** A national sample of 4,086 U. S. residents who were between the ages of 18 and 30 completed an online survey. The survey included questions about their experiences with drugging victimization and drugging perpetration. **Results:** About 18.7% of sampled participants reported experiencing drugging victimization. Analyses indicated that risk behaviors (i.e., binge drinking, illicit drug use, and marijuana use) were significantly and positively related to drugging victimization. Trait sensation seeking significantly directly predicted drugging victimization and also mediated the relationships between risk behaviors (binge drinking, illicit drug use, and marijuana use) and drugging victimization. About 2.9% of the sample indicated that they

had drugged someone. Analyses indicated that being male and engaging in binge drinking, and illicit drug use each significantly and positively predicted drugging perpetration. Trait sensation seeking neither directly predicted drugging perpetration nor mediated the effects other variables had on drugging perpetration. **Conclusion:** Drugging IPV is a prevalent social issue that requires further study. Being male and engaging in binge drinking and illicit drug use meaningfully predicted perpetration while marijuana use, other demographic characteristics, and sensation seeking did not. Further, engaging in binge drinking, illicit and marijuana drug use, and having high trait sensation seeking was found to be more important in the prediction of drugging victimization than demographic characteristics. Notably, Sensation seeking significantly mediated the relationship between risk behaviors and drugging victimization, indicating that those who more often engaged in these risk behaviors were more likely to have experienced drugging victimization if they were also higher in trait sensation seeking. As such, it is imperative that efforts to prevent drugging IPV target not only substance use behaviors, but also aspects of the intrinsic propensity to seek novel and intense sensations and experiences.

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CHAPTER 1

INTRODUCTION

Overview

Interpersonal violence (IPV) can be defined as the intentional use of physical, sexual, or psychological force or power against another individual or group of individuals by a person and can result in the psychological maladaptation, physical harm, or even death of victims (Mercy et al., 2017). As discernable by this definition, IPV may occur in many forms. Commonly, instances of sexual harassment, sexual assault, domestic violence, and stalking are conceptualized as prototypical examples of what constitutes IPV. IPV is a grave social issue that affects millions of people throughout their lives. In the United States, it is estimated that 25 percent of women and 10 percent of men will experience some form of IPV at least once during their lifetime (National Coalition Against Domestic Violence, 2020).

Recently, the issue of IPV in the form of drugging has gained more attention. Drugging has been defined as “administering a drug or alcohol to someone without their knowledge or consent” (Swan et al., 2017, p. 253). As victimization can be defined as the subjection of someone to deception or fraud or other unjust treatment (Merriam-Webster, n.d.), considering drugging in the context of *bodily integrity* makes evident that the behavior is an embodiment of IPV. The principle of bodily integrity posits that humans have a natural right to the physical parameters of their person (Neff, 1990; Patosalmi, 2009). Included in this right are the aspects of autonomy and ownership over oneself,

which implicates a right to self-determine and choose what happens to their body. As drugging encompasses a violation of a person's right to consent and choose what happens to their body, much like in the case of sexual assault, the act constitutes IPV victimization.

Aims

This thesis will begin by delineating the current literature on drugging IPV regarding prevalence rates and risk factors. Next, the relationship between drugging and risk behaviors will be explored using the framework of the lifestyle-routine activities theory (L-RAT). The connection between sensation seeking and engaging in risk behaviors will also be elucidated, and the theoretical connection between sensation seeking and drugging IPV will be discussed. Throughout, gaps in our understanding regarding the factors that contribute to the occurrence of drugging IPV will be highlighted. Next, the present thesis seeks to expand on the extant literature on drugging IPV by empirically examining the relationships between gender, sexual orientation, substance use behaviors, and sensation seeking and drugging victimization and perpetration in a national sample of adults. Like the literature on other forms of IPV, current examinations of drugging IPV has indicated that such demographic characteristics as being a woman (Schramm et al., 2018; Swan et al., 2017), and having a minority sexual orientation (Schramm et al., 2018), are associated with a significantly increased risk of experiencing drugging victimization. As such, the association between gender and sexual orientation, and drugging victimization and perpetration will be examined. Further, using the logic purported by the L-RAT, it is expected that binge drinking, and illicit drug use may be components of risky lifestyles that are exacerbated by trait

sensation seeking that place adults at an increased risk of experiencing drugging victimization. Finally, results and implications of analyses that aim to elucidate what demographic, behavioral, and trait characteristics predict drugging victimization and drugging perpetration will be discussed. On the whole, as drugging literature is still nascent, this paper will uniquely contribute to IPV literature, as the present analyses will begin to fill the gaps in our understanding of what contribute to drugging occurrences.

The Nature and Prevalence of Drugging

Of late, social awareness of drugging has increased due to the mainstream media coverage of high-profile instances of the behavior, such as the case of Bill Cosby for committing drug-facilitated sexual assault (Kennedy & Hernandez, 2021). While the publicization of this specific case has made the general occurrence of drugging more visible and validated it as an issue of concern, scholars emphasize that it has lent to a rather narrow public conceptualization of what constitutes drugging (Colyer & Weiss, 2018; Hamby, 2018). Specifically, in accordance with its media coverage, common conceptualizations of drugging often exclusively confine the concept to spiking someone's drink with a "roofie" with the intent to engage in sexual activities. However, one recent study that examined the prevalence, motives, and outcomes of drugging in college students suggests that drugging is perpetrated with a variety of motives and through the use of a variety of substances. Specifically, Swan et al. (2017) found that respondents who had drugged someone or knew a drugging perpetrator most commonly reported the motive as being for "fun". Sexual assault was the second most commonly indicated reason for drugging perpetration. Further, in this study, the substances that were reported being used in drugging instances varied widely; specifically, Rohyponol,

commonly known as “roofies”, Xanax, ecstasy, cocaine, GHB, methamphetamine, ketamine, and Benadryl were reported by respondents (Swan et al., 2017). These results underscore that drugging occurs for more motives and by the use of more substances than what may be traditionally represented in popular media.

Because the social conceptualization of what constitutes drugging fails to include other means by which this form of IPV occurs, its true prevalence is likely underestimated by laypersons. Extant literature indicates that between 4 and 10.3 percent of people have experienced being drugged (Coker et al., 2016; Butler et al., 2021; Lasky et al., 2017; Swan et al., 2017; Warner et al., 2018) and between 1.4 and 2.1 percent of people have drugged someone or knew someone who has perpetrated drugging (Coker & Bush, 2015; Lasky et al., 2017; Schramm et al., 2018; Swan et al., 2017). Most examinations of drugging IPV to date have focused on college and university populations; however, one study specifically compared the prevalence rates of drugging between women who were enrolled in college and women who were not (Coker et al., 2016). Prevalence rates of drugging were not significantly different between the two populations, indicating that drugging is a wide-reaching issue. As such, if the aforementioned estimated rates of drugging generalize to the larger population, rates of drugging victimization may be similar or higher than those of intimate partner violence; according to the National Intimate Partner and Sexual Violence Survey (NISVS), it is estimated that about 0.5% of men and 8.8% of women experience physical or psychological violence by an intimate partner during their lifetime (Breiding et al., 2014).

Risk Factors for Drugging Victimization

Gender and Sexual Orientation

Extending beyond incidence rates, scholars have also begun to examine who is most often drugged. Extant literature suggests that, like in the case of other forms of IPV, women may be more likely to report experiencing drugging victimization compared to men. Specifically, two studies each found that women were a little over twice as likely to report having been drugged than men (Schramm et al., 2018; Swan et al., 2017). In addition to understanding the difference in prevalence rates of drugging victimization by gender, the cardinal aim of the study by Schramm et al. (2018) was to examine whether rates of drugging victimization also varied by sexual orientation. For men, being a sexual minority related to differences in rates of drugging victimization such that the proportion of gay or bisexual male participants who reported knowing or suspecting that they were drugged (9.4%) was almost three times higher compared to the proportion of heterosexual men who had been victimized (3.7%). For women in this sample, rates of drugging victimization did not differ significantly between those who identified as heterosexual (9.8%) and those who identified as bisexual or lesbian (10.0%). Taking these results together, it appears that being a woman greatly increases one's odds of experiencing drugging victimization, but men who identify with a minority sexual orientation may experience similar rates of drugging victimization as women.

Race/Ethnicity

In addition to rates of drugging victimization differing based on gender and sexual orientation, literature indicates that the rates may also differ by race/ethnicity. Over the last few decades, scholarship has consistently demonstrated that those who are

racial/ethnic minorities experience higher rates of sexual IPV (Acierno et al., 1997; Coulter et al., 2017; Mellins et al., 2017); however, a recent study indicates that this pattern may not be representative of drugging IPV. Warner et al. (2018) compared rates of drugging victimization between women attending predominantly White institutions (PWI) and women attending historically Black colleges and universities (HBCUs). Results indicated that White women reported slightly higher rates of drugging victimization than non-White women, as women who attended PWIs reported knowing or suspecting that they had been drugged (5%) more often than those at HBCUs (4%; Warner et al., 2018). Further, the authors reported that the risk behavior of substance use, including binge drinking, significantly and positively predicted drugging victimization. Results from Warner and colleagues' (2018) study and previous studies (e.g., Bryant et al., 2012; Goings et al., 2019; Naimi et al., 2003; Wechsler et al., 2002) have established that Black and other youth of color typically engage in binge drinking at significantly lower rates than their White counterparts. In the context of this trend, Warner et al. (2018) postulate that the difference in drugging prevalence rates by race/ethnicity may be due in part to this behavioral difference.

Binge Drinking

In this vein, IPV literature has also noted a significant positive relationship between binge drinking and drugging victimization. Schramm et al. (2018) found that, no matter participants' gender and/or sexual orientation, participants who had engaged in binge drinking on at least one occasion in the past month, compared to not at all, were more likely to report experiencing at least once instance of drugging victimization. Further, results from the study of Lasky et al. (2017) indicate that a significantly higher

proportion of those who reported binge drinking on 10 or more days in the past month reported being victims of drugging compared to those who binge drank less often or not at all. Noting this positive relationship between binge drinking and one's susceptibility to being drugged, a study by Butler and colleagues (2021) examined how experiencing drugging victimization during their freshmen year of college related to students' subsequent binge drinking behavior and risk of revictimization. Notably, their results indicated that about 36% of students who had been drugged during their freshmen year reported revictimization in the following year, and their binge drinking behaviors significantly predicted drugging victimization at both time points. Taken together, this literature implicates binge drinking as a risk behavior that increases one's likelihood of experiencing drugging victimization.

Illicit Drug Use and Marijuana Use

Studies also indicate that the recreational use of other substances is positively associated with drugging victimization. For instance, Schramm et al. (2018) found that illicit drug use was positively associated with drugging victimization such that participants' likelihood of reporting that they had been drugged increased by about 64% for both male and female participants if they reported using illicit substances. The results of Warner et al. (2018) corroborate this trend as they indicated that, regardless of if they attended a PWI or HBCU, women who reported using drugs were significantly more likely to report having been drugged at least once compared to those who reported never using drugs. More specifically, in this study, marijuana use alone, which was reported much more often both by participants at PWIs and those at HBCUs than the use of other

illicit drugs, increased participants' odds of reporting drugging victimization by about 60% (Warner et al., 2018).

Party Culture

In addition to binge drinking and marijuana and illicit drug use, studies have also linked other factors to an increased risk of drugging IPV. As scholars have traditionally focused on college populations, many have found social aspects of campus culture to coincide with higher rates of drugging incidents, such as being a member of fraternities and sororities (Lasky et al., 2017; Schramm et al., 2018; Warner et al., 2018). For instance, the results of Lasky et al. (2017) noted higher rates of drugging among sorority women (14.1%) compared to women who were not in a sorority (6.0%). However, other aspects of party culture not confined to college campuses have also been associated with an increased risk of drugging victimization such as frequenting bars, clubs, and parties (Warner et al., 2018). What may underpin the association between these behaviors (i.e., binge drinking, substance use, and participating in party-culture environments) and an increased risk of experiencing drugging victimization is the regularity in which they are engaged. In other words, it is postulated that the more often one engages in binge drinking and/or substance use or is active in environments where these activities may be normative, the more likely they are to experience drugging victimization.

Contextualizing Drugging to the Lifestyle-Routine Activities Theory (L-RAT)

This supposition aligns with the lifestyle-routine activities theory (L-RAT) that criminology scholars apply when examining victimology. The L-RAT specifically posits that the risk of victimization is increased when one's routines and overall lifestyle regularly: (1) place one in close proximity to offenders; (2) places one in environments

with heightened exposure to crime; (3) involve engaging in activities that make one vulnerable to experience violence and unable to escape danger; and (4) leave one in the absence of bystanders who may deter attacks (Cohen & Felson, 1979; Fisher et al., 2010; Hindelang et al., 1978; Jensen & Brownfield, 1986; Pratt & Turnavic, 2016). In the realms of sexual and physical IPV, this theory has been widely applied and integral to the identification of risky lifestyle and routine activities that increase individuals' odds of victimization (Fisher et al., 2010; Jensen & Brownfield, 1986; Weiss & Dilks, 2016). By this theory, in the specific context of drugging IPV, parties, bars, and clubs serve as environments in which individuals' exposure to potential offenders and opportunities to be drugged is likely heightened. Further, as Hamby and Grych (2013) elucidate that the specific use of alcohol and drugs inhibits one's motor ability to physically ward off an attack or escape danger, and one's cognitive ability to even judge when danger is present, these environments also involve normative activities (i.e., binge drinking and/or substance use) that leave victims incapable of escaping danger. Finally, because drugging is typically perpetrated inconspicuously, opportunities for bystanders to intervene are likely low by nature.

Sensation Seeking and Drugging

Other research on risk behaviors has examined how possessing certain personality traits may relate to routinely engaging in them. For instance, scholars have begun to examine behavioral patterns of risk as they relate to sensation seeking, "...a trait defined by the seeking of varied, novel, complex, and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experience" (Zuckerman, 1994, p. 27). Research indicates that those who have high

levels of the trait are, in general, significantly more likely to take risks in various realms of daily life compared to those who demonstrate lower levels of the trait (Lydon-Staley et al., 2020; McGowan et al., 2022). Specifically, literature indicates that those high in sensation seeking are more likely to engage in reckless driving, dangerous sports, dangerous vocations, risky sexual behavior (Zuckerman, 2015), and pathological gambling (Langewisch & Frisch, 1999). Notably, literature consistently demonstrates that men typically report higher rates of trait sensation seeking than women (Cross et al., 2013; Evans-Polce et al., 2018; Obst et al., 2020; Zuckerman, 2007). Further, Evans-Polce et al. (2018) found that gender-differences in trait sensation seeking endure from adolescence through age 30.

Over the last several years, research has also established that those who demonstrate higher levels of sensation seeking are also more likely to routinely engage in binge drinking and substance use, behaviors previously discussed as increasing the risk of drugging victimization (Barnum & Armstrong, 2019; Evans-Polce et al., 2018; LaSpada et al., 2020; Lydon-Staley, 2020; McGowan et al., 2022; Obst et al., 2020; Zuckerman, 2007; Zuckerman, 2015). Further, research indicates that those high in sensation seeking are likely to associate with others who are also high in sensation seeking, and therefore, supports the notion that that these risky behaviors become regarded as socially normative (Barnum & Armstrong, 2019). As such, from the L-RAT perspective, it is plausible that these individuals are more prone to seek out environments in which the opportunity for victimization is highly probable, as well as engage in behaviors (e.g., binge drinking and substance use) that inhibit their ability to detect, deter, or escape danger. Therefore, it is plausible that sensation seeking mediates the relationship between risk behaviors and

victimization. Further, as men report higher levels of trait sensation seeking than women, the relationship between gender and drugging IPV may also be mediated by trait sensation seeking. In this vein, the present thesis proposes that sensation seeking may explain part of the relationships between gender and drugging victimization and drugging perpetration and each risk behavior and drugging victimization and drugging perpetration.

Drugging Perpetration

Beyond estimating prevalence rates, of current knowledge, only one study has examined drugging perpetration (Swan et al., 2017). As a result, the present thesis will examine characteristic and behavioral correlates of drugging perpetration. Literature has yet to elucidate whether drugging perpetration differs based on demographic characteristics; however, as research indicates that men have a greater likelihood of perpetrating other forms of IPV (e.g., Breiding et al., 2014), it is plausible that being male may increase one's proclivity to perpetrate drugging. Further, as the L-RAT purports that victimization occurs in environments that involve the normative engagement in binge drinking and illicit drug use (Fisher et al., 2010; Hamby & Grych, 2013; Jensen & Brownfield, 1986; Weiss & Dilks, 2016), it is plausible that there is a positive relationship between engaging in these behaviors and drugging perpetration. Further, extant literature indicates that sensation seeking may correspond with higher levels of exhibiting antisocial behaviors (LaSpada et al., 2020). As such, it is possible that those who score higher on sensation seeking may be more likely to drug someone.

Research Aims and Hypotheses

To further elucidate drugging IPV, the proposed thesis seeks to expand on the extant literature on drugging IPV by examining the ability of demographic characteristics and substance use behaviors to predict drugging victimization and perpetration in a national sample of adults. The influence of sensation seeking on the predictive ability of gender and risk behavior factors will also be assessed. Specifically, analyses will reflect the following hypotheses:

Hypothesis 1: Being female, having a minority sexual orientation, high rates of binge drinking, illicit drug use, marijuana use, and sensation seeking will predict drugging victimization. Additionally, it is hypothesized that sensation seeking will mediate the relationships between gender and drugging victimization and risk behaviors (i.e., binge drinking, illicit drug use, and marijuana use) and drugging victimization.

Hypothesis 2: Being male, having high rates of binge drinking, illicit drug use, marijuana use, and sensation seeking will predict drugging perpetration. Additionally, it is hypothesized that sensation seeking will mediate the relationships between gender and drugging perpetration and risk behaviors (i.e., binge drinking, illicit drug use, and marijuana use) and drugging perpetration.

CHAPTER 2

METHODS

Procedure

Data for the current study were collected in 2019 via an online survey administered through Amazon's Mechanical Turk (MTurk). MTurk is an online crowdsourcing platform where "requesters" post Human Intelligence Tasks (HITs; i.e., research studies and surveys) and "workers" select which tasks they want to complete for a small monetary award. HITs are generally able to be completed within a few minutes. MTurk is widely used by researchers, many of whom post surveys that workers complete (Paolacci & Chandler, 2014). The full survey was finalized by the primary investigators after several rounds of cognitive testing. Full IRB approval for the study was granted by Northeastern State University, the institution of one of the primary investigators. MTurk workers were eligible to participate in this study if they were between ages 18 and 30, U.S. residents, and proficient in English. Participants indicated whether they met these criteria before advancing to the main part of the survey. Additionally, the Information Technology manager of the University of South Carolina's Department of Psychology checked the IP addresses of respondents to make sure they were all in the United States, and they were. Upon completing the survey, each respondent received a code with which they could redeem compensation for their time in the amount of \$0.65 through MTurk.

Participant Sample

The initial sample was comprised of 4,105 participants. Data were deleted from 14 participants who consistently gave illogical answers to multiple open-ended questions (e.g., “yes,” “nice,” or “good” to questions such as “What was the setting where the [drugging] incident occurred?”), suggesting that they were bots. Further, data were deleted from five participants whose response times were much shorter (i.e., 28, 32, 57, 62, and 67 seconds) than average ($M = 526.79$ seconds). Therefore, the current study has a final sample size of 4,086 participants. All participants were between the ages of 18 and 30 with an average age of $M = 25.31$ years. The majority of the sample identified as White only (65.3%, $n = 2,670$), female (62%, $n = 2,532$), and heterosexual (76.6%, $n = 3,128$). Other sample demographic information will be provided in the results section.

Measures

The complete survey items can be found in Appendix A.

Demographics

Participants indicated whether or not they were presently enrolled in college or university, and if they were, their current year in school. Those respondents who indicated that they were not currently enrolled in college or university indicated the highest level of education they had achieved, with choices ranging from “Some elementary, middle, or high school” to a “Professional degree such as MD or JD.” Participants also indicated their age, gender (from the choices “Man,” “Woman,” “Trans/gender queer,” and “Other”) and sexual orientation (from the choices “Bisexual,” “Gay,” “Lesbian,” “Straight/heterosexual,” and “Other” (e.g., asexual, pansexual, queer, questioning). Due to small group sizes of those whose gender was “Trans/gender queer”

or “Other” and those whose sexual orientation was “Bisexual,” “Gay,” “Lesbian,” or “Other,” respective dichotomous measures of these variables were used in main analyses (i.e., gender using only the choices “Man” and “Woman,” coded as 0 and 1, respectively; and sexual orientation using only the choices “Straight/heterosexual” and “LGBO,” coded as 0 and 1, respectively). Finally, participants indicated their race/ethnicity by checking all of the following terms that applied to them: White; Black; Hispanic; Latino/a/x; Asian or Pacific Islander; American Indian, Alaskan Native, or Hawaiian Native; Biracial or multiracial; or Other with a text box. Race/ethnicity of respondents was collapsed into two categories for the main statistical analyses: “White,” coded as 0, included individuals who only identified as White, and “non-White,” coded as 1, included individuals who identified as at least one race/ethnicity of color.

Risk Behaviors

Binge Drinking Binge drinking was assessed with the item, “On average, in the last 12 months, how many times have you had five or more drinks of alcohol in a single sitting?” Answers to this question were coded as the following: 0 = None; 1 = Once a year; 2 = Twice a year; 3 = Less than once a month; 4 = Once a month; 5 = Twice a month; 6 = Three times a month; 7 = Once a week; 8 = Twice a week; 9 = Three times a week; 10 = Four times a week; 11 = Five times a week; 12 = 6 times a week; and 13 = Every day.

Marijuana Use. Participants were asked to indicate whether they used marijuana or any marijuana-containing products in the last 12 months, including: 1) Marijuana (e.g., blunt, joint or vape); 2) Concentrated marijuana (e.g., 710, wax, honey oil, budder, dabs); and 3) Edibles containing marijuana or concentrate. Answers to these three items were

compiled into one single, binary variable that labeled participants as either having (0) not used marijuana or a marijuana-containing product in the last year or, (1) used marijuana or a marijuana-containing product in the last year.

Illicit Drug Use. Participants were asked to indicate their use of illicit drugs by indicating whether they had taken any of the non-prescription drugs listed in the last 12 months. The list included the following 12 types of illicit drugs: K2 or Spice; Cocaine (including powder, crack, or freebase); Amphetamines or methamphetamines (e.g., speed); Heroin; LSD or acid; Hallucinogens (such as Mushrooms); Bath salts; Ecstasy (MDMA); Inhalants; Gamma Hydroxybutyric Acid (GHB); Rohypnol (Roofies); and Ketamine (Special K). A composite illicit drug use variable was created by summing the number of drugs each participant indicated that they had taken in the past year. As such, possible scores ranged from 0, indicating that the participant had not used any illicit drugs in the past year, to 12 indicating that the participant had used each of the listed illicit drugs in the past year.

Drugging Victimization

Participants indicated whether or not they had been drugged by answering “yes” or “no” in response to six questions that depicted different modes of drugging (e.g., lacing a drink, food, or other substance) using either drugs or alcohol. One such item included in the survey was “Has someone ever: Put a different drug in a joint, blunt, or vaporizing device, without your knowledge, that you smoked?” In response to one of these items (“Has someone ever: Misled you about the amount of alcohol in your alcoholic drink such that the drink had more alcohol than you thought?”), many participants gave qualitative feedback that, although they had experienced the scenario,

they did not consider it to be drugging because either it had been done by accident or they simply did not expect the drink to be as strong as it was. As a result, answers to this question were not included in analyses. Using the answers to the remaining five items, a binary drugging victimization variable was created that labeled participants as (0) a non-victim if they did not indicate experiencing any of these instances or (1) a drugging victim if they indicated experiencing at least one of these instances.

Drugging Perpetration

Participants indicated whether or not they had ever perpetrated drugging by answering “yes” or “no” in response to six questions that depicted different modes of drugging using either drugs or alcohol. These scenarios were the same as those used to measure victimization, however the active agent of the instance changed from someone else doing the act to the participant doing the act (e.g., “Has someone ever: Put a drug into your food or beverage without your knowledge” was changed to “Have you ever: Put alcohol a drug into someone else’s food or beverage without their knowledge). Similar to the victimization item, some participants indicated that although they had endorsed the item about overpouring alcohol in someone’s alcoholic drink, it had been an accident. Therefore, the answers to the respective perpetration item (“Have you ever: Misled someone about the amount of alcohol in their alcoholic drink such that the drink had more alcohol than they thought?”) were not included in analyses. Using the answers to the remaining five items, a binary drugging perpetration variable was created that labeled participants as (0) a non-perpetrator if they did not indicate doing any of these actions or (1) a drugging perpetrator if they indicated doing at least one.

Sensation Seeking

Trait sensation seeking was measured using the four-item Brief Sensation Seeking Scale (BSSS-4; Stephenson et al., 2003). Widely used measures of sensation seeking are typically long (e.g., the 40-item Sensation Seeking Scale – V by Zuckerman et al., 1978), featuring several items to measure each of the four factors of sensation seeking (i.e., experience seeking, disinhibition, thrill and adventure seeking, and boredom susceptibility). The BSSS-4 was created to allow researchers to measure each of these dimensions of sensation seeking in a more succinct way by including only one item per respective dimension. The items of the BSSS-4 are as follows: “I would like to explore strange places” captures the experience seeking factor; “I like to do frightening things” captures the thrill and adventure seeking factor; “I like new and exciting experiences, even if I have to break the rules” captures the disinhibition factor; and “I prefer friends who are exciting and unpredictable” captures the boredom susceptibility factor. Participants in the present sample rated the extent to which they perceived each item to describe themselves on a scale ranging from 1 (*Strongly disagree*) to 5 (*Strongly agree*). When developing the BSSS-4, Stephenson et al. (2003) obtained a coefficient alpha of 0.66. In the present study, a Cronbach’s alpha of .78 indicated good consistency among these sensation seeking items in this sample. Participants’ answers to these four items were averaged in the creation of a single new variable. Participants’ average sensation seeking scores ranged from 1, indicating low levels of trait sensation seeking, to 5, indicating relatively high levels of trait sensation seeking.

Statistical Analyses

The first set of analyses were conducted to understand the demographic characteristics of the sample. Descriptive statistics – proportions, means, standard deviations – were calculated to understand the gender, racial, and sexual orientation distribution of the sample, as well as to examine the sample proportion that had been a drugging victim and/or drugging perpetrator.

Hypothesis 1

The first hypothesis posits that being female, having a minority sexual orientation, and reporting high rates of binge drinking, illicit drug use, marijuana use, and high trait sensation seeking will positively relate to drugging victimization. Further, it was expected that trait sensation seeking would mediate the ability of risk behaviors (binge drinking, illicit drug use, and marijuana use) to predict drugging victimization. Simple mediation analyses were carried out to test this hypothesis using PROCESS for SPSS, developed by Hayes (2012).

Hypothesis 2

The second hypothesis posits that being male, having high rates of binge drinking, illicit drug use, marijuana use, and sensation seeking are associated with an increased risk of perpetrating drugging IPV. Additionally, it was expected that trait sensation seeking would mediate the ability of risk behaviors (binge drinking, illicit drug use, and marijuana use) to predict drugging perpetration. Simple mediation analyses were carried out to test this hypothesis using PROCESS for SPSS (Hayes, 2012).

Assumptions

Variance inflation factor (VIF) values of all independent variables included in each model were assessed and indicated that multicollinearity was not an issue among them (all VIF values were 1.2 or lower). Finally, the Hosmer and Lemeshow test was used to assess the goodness of fit of the models to the data. Non-significant results indicated that it was appropriate to fit the data to the models.

CHAPTER 3

RESULTS

Demographics

Of the total sample (n = 4,086), the majority of participants identified primarily as White (65.3%, n = 2,670) while the remaining sample identified as the following: 11.6% (n = 475) identified as Biracial or Multiracial; 9.6% (n = 391) identified as Black; 7.0% (n = 288) identified as Asian or Pacific Islander; 5.6% (n = 230) identified as Hispanic or Latino/a/x; 0.4% (n = 17) identified as American Indian, Alaskan Native, or Hawaiian Native; and 0.4% (n = 15) identified as Other. The majority of participants identified as women (62.0%, n = 2,532), while 36.1% (n = 1,476) identified as men and 1.9% (n = 78) identified as transgender, gender queer, or other. Most participants (76.6%, n = 3,128) identified as Straight or heterosexual. Further, 13.6% (n = 556) identified as bisexual, 5.0% (n = 205) identified as “Other (e.g., asexual, pansexual, queer, questioning),” 2.8% (n = 113) identified as lesbian, and 2.1% (n = 84) identified as gay. The largest proportion of participants (32.7%, n = 1,338) indicated that they had obtained at least a college degree. A total of 1,001 participants (27.9%) indicated that they had obtained an associate’s degree or lower, and 8.3% of participants (n = 330) indicated that they had obtained a post-graduate degree. Further, 31.9% of participants (n = 1,307) indicated that they were currently enrolled in a 2-year or 4-year college or university. About 32% of participants (n = 1,307) did not indicate their level of education.

Risk Behaviors & Trait Sensation Seeking

Binge Drinking

Descriptive statistics of past-year binge drinking, illicit drug use, marijuana use, and trait sensation seeking are displayed in Table 3.1. On average, participants reported binge drinking 2.19 times per year ($SD = 2.31$). Further, 35.8% of the sample reported that they had not binge drank at all in the last year. Of the 3,097 participants who answered the binge drinking items, the majority of participants (64.2%) reported binge drinking on at least one occasion in the past. More specifically, 33.5% of participants ($n = 1,035$) reported binge drinking once a month or more often in the past year.

Illicit Drug Use

The majority of participants (87.2%) reported not having taken/used any illicit drugs in the past year. Additionally, 12.8% of participants reported taking at least one kind of illicit drug in the past year and 15.4% of participants indicated having taken 3 or more kinds of illicit drugs (up to 12).

Marijuana Use

The majority of participants (59.5%) indicated that they had not used marijuana or marijuana-containing products in the past year. On the other hand, 40.5% of participants indicated that they had used marijuana or a marijuana-containing product in the past year.

Sensation Seeking

Trait sensation-seeking average scores ranged from 1 to 5 with 1 indicating that a participant self-reported virtually never seeking novel and intense experiences, and 5 indicating that a participant self-reported that they constantly seek out novel and intense experiences. Participants' average sensation-seeking score was $M = 3.36$ ($SD = 0.90$). On

the other hand, 159 participants (3.9%) had an average sensation seeking score of 5, which indicated that they often sought out novel and intense experiences.

Drugging IPV

Prevalence and Characteristics of Drugging Victimization

Endorsement rates of all drugging victimization items by drugging victims are displayed in Table 3.2. Of the total sample, 18.7% of participants reported that they had been drugged at least once. Among drugging victims, the number of times participants had been drugged ranged from 1 to 30, with an average of 3.87 times ($SD = 4.29$), though most often, respondents reported being drugged once. Further, the average age at the time of victimization reported was 20.31 years ($SD = 3.44$ years). Those who indicated that they had been drugged most commonly endorsed the following two items: someone “Put alcohol into your non-alcoholic drink without your knowledge” (45.7% of drugging victims); and someone “Put a different drug in a joint, blunt, or vaporizing device, without your knowledge that you smoked” (44% of drugging victims).

Drugging victimization rates by demographic variable. Drugging victimization rates by demographic variables are displayed in Table 3.3. Nineteen percent of women reported being a victim of drugging while 18.6% of men, 14.5% of those who identified as “Trans/gender queer,” and 11.1% of those who identified as “Other” reported experiencing drugging IPV. Of those who identified as having a minority sexual orientation (i.e., lesbian, gay, bisexual, or “other”), 21.7% reported being drugged while 17.8% of those who identified as being straight or heterosexual were drugged. A higher proportion of participants who identified as White reported drugging victimization (20.0%) compared to the proportion of those identifying as non-White (16.5%).

Drugging victimization rates by risk behavior. Proportions of victims and non-victims who engaged in past-year risk behaviors are displayed in Table 3.4. A higher proportion of participants who had been drugged reported using at least one kind of illicit drug (26.1%, $n = 200$ of 766 total victims) compared to those who had not been drugged (9.7%, $n = 321$ of 3,320 total non-victims). Similarly, a higher proportion of participants who had been drugged reported using marijuana or a marijuana-containing product at least once in the past year (57.3%, $n = 439$ of 766 total victims) compared to those who had not been drugged (36.6%, $n = 1,214$ of 3,320 total non-victims). Finally, 62.7% of those who indicated experiencing drugging victimization also reported binge drinking at least once in the past year ($n = 480$ of 766 total victims), while 40.5% of those who were not drugged did ($n = 1,508$ of 3,320 total non-victims).

Prevalence and Characteristics of Drugging Perpetration

Endorsement rates of all drugging perpetration items by drugging perpetrators are displayed in Table 3.5. Of the total sample, 2.9% of participants ($n = 118$) reported that they had drugged someone. Among those who had perpetrated drugging, the number of times reported ranged from 1 to 34, with an average of 6.12 times ($SD = 6.59$), though most respondents reported drugging someone once. The average age at the time of perpetration reported was 21.40 years ($SD = 3.79$ years). Those who indicated that they had drugged someone most commonly endorsed the following two items: I “Put alcohol into someone’s non-alcoholic drink without their knowledge” (59.3% of drugging perpetrators, $n = 70$); and “Told someone you were giving them one kind of drug, but gave them a different kind of drug, such as ecstasy instead of aspirin” (43.2% of drugging perpetrators, $n = 51$). Interestingly, 2.3% of the total sample ($n = 92$) indicated that they

had been both a victim and a perpetrator of drugging. This also indicates that the majority of participants who had perpetrated drugging (92 of 118 = 77.97%) have also been victimized, and a smaller proportion of victims (92 of 766 = 12.01%) have also perpetrated drugging.

Drugging perpetration rates by demographic variable. Drugging perpetration rates by demographic variables are displayed in Table 3.6. Of all sampled men, 4.6% reported drugging someone. Of those sampled who identified as “Trans/gender queer”, 2.9% reported having drugged someone. Further, 1.9% of sampled women reported perpetrating drugging. Of those who identified as having a minority sexual orientation (i.e., lesbian, gay, bisexual, or “other”), 3.7% reported perpetrating drugging IPV while 2.7% of those who identified as being straight or heterosexual did. Of those who identified as non-White, 3.0% reported drugging someone, while 2.8% of those who identified as White did.

Drugging perpetration rates by risk behavior. Drugging perpetration rates by risk behavior are displayed in Table 3.7. A higher proportion of participants who reported drugging someone also reported using at least one illicit drug in the past year (39.0%, n = 46 of 118 perpetrators total) compared to those who had not drugged someone (12.0%, n = 475 of 3,968 non-perpetrators total). Further, a higher proportion of participants who reported drugging perpetration also reported using marijuana or a marijuana-containing substance at least once in the past year (58.5%, n = 69 of 118 total perpetrators), while those who did not report drugging perpetration did (39.9%, n = 1,584 of 3,968 total non-perpetrators). Similarly, 68.6% of drugging perpetrators reported binge drinking on at

least one occasion in the past year ($n = 81$ of 118 total perpetrators) while 48.1% of non-perpetrators did ($n = 1,907$ of 3,968 total non-perpetrators).

Hypothesis 1

Using PROCESS for SPSS (Hayes, 2012), a simple mediation analysis using logistic regression was performed to test Hypothesis 1 (results displayed in Table 3.8), which posited that being female and having a minority sexual orientation would predict drugging victimization. Additionally, it was hypothesized that reporting high rates of binge drinking, illicit drug use, marijuana use would predict drugging victimization as mediated by trait sensation seeking. The full model contained seven independent variables (participant gender, sexual orientation, race/ethnicity, illicit drug use, marijuana use, binge drinking, and average trait sensation-seeking score), and was statistically significant, $\chi^2(7, N = 3,043) = 166.0, p < .001$, and explained between 5.3% (Cox and Snell R squared) and 8.4% (Nagelkerke R squared) of the variance in drugging victimization.

A total of four of the seven predictor variables included in the model made statistically significant contributions in the prediction of drugging victimization. Specifically, binge drinking positively predicted drugging victimization ($\beta = .09, SE = .02, z = 4.65, p < .001$), indicating that the more often participants reported binge drinking, the higher their odds were of reporting drugging victimization. Analyzing the indirect effects, results indicated that sensation seeking significantly mediated this relationship such that average sensation seeking scores accounted for 20.17% of the variance in the effect of binge drinking on drugging victimization, $\beta = .02, 95\% \text{ C.I. } (.012, .028)$. Illicit drug use also significantly positively predicted drugging victimization

($\beta = .20$, $SE = .05$, $z = 4.15$, $p < .001$), indicating that the higher the number of illicit drugs participants reported using, the higher their odds were of reporting drugging victimization. Indirect effects indicated that trait sensation seeking also significantly mediated this relationship such that average sensation seeking scores accounted for 20.16% of the variance in the effect of illicit drug use on drugging victimization, $\beta = .04$, 95% C.I. (.024, .058). Additionally, marijuana use significantly positively predicted drugging victimization ($\beta = .35$, $SE = .10$, $z = 3.45$, $p = .001$), indicating that participants who reported using at least one marijuana product were at higher odds of reporting drugging victimization. Sensation seeking significantly mediated this relationship such that average sensation seeking scores accounted for 28.42% of the variance in the effect of marijuana use on drugging victimization, $\beta = .10$, 95% C.I. (.063, .145). Finally, sensation seeking significantly positively predicted drugging victimization directly ($\beta = .35$, $SE = .06$, $z = 5.70$, $p < .001$), indicating that higher levels of trait sensation seeking related to higher odds of drugging victimization. Neither gender, sexual orientation, nor race/ethnicity significantly related to whether or not participants reported drugging victimization.

Hypothesis 2

Using PROCESS for SPSS (Hayes, 2012), a simple mediation analysis using logistic regression was performed to test Hypothesis 2 (results displayed in Table 3.9), which posited that being male would predict drugging perpetration and that reporting high rates of binge drinking, illicit drug use, marijuana use would predict drugging perpetration as mediated by trait sensation seeking. The full model contained seven independent variables (participant gender, sexual orientation, race/ethnicity, illicit drug

use, marijuana use, binge drinking, and average sensation seeking score), and was statistically significant, $\chi^2 (7, N = 3,043) = 55.80, p < .001$, and explained between 1.8% (Cox and Snell R squared) and 7.7% (Nagelkerke R squared) of the variance in drugging perpetration.

A total of three of the seven predictor variables included in the model made statistically significant contributions in the prediction of drugging perpetration. Specifically, gender significantly predicted drugging perpetration ($\beta = -.72, SE = .22, z = -3.20, p = .001$), with the negative coefficient indicating that sampled men (coded as 1) were significantly more likely to report having drugged someone than sampled women (coded as 2). Additionally, binge drinking ($\beta = .11, SE = .04, z = 2.53, p = .01$) and illicit drug use ($\beta = .32, SE = .07, z = 4.52, p < .001$) significantly positively predicted drugging perpetration, indicating that the more frequent participants reported engaging in each of these risk behaviors, the higher their odds were of reporting drugging perpetration. Analyzing the indirect effects, results indicated that sensation seeking did not mediate any of the relationships between risk behaviors or gender and drugging perpetration. Neither sexual orientation, race/ethnicity, marijuana use, nor sensation seeking significantly related to whether or not participants reported drugging victimization.

Table 3.1

Descriptive statistics for past-year risk behaviors, sensation seeking, drugging victimization and drugging perpetration.

	<i>N</i>	Minimum	Maximum	<i>M</i>	<i>SD</i>	<i>n (%)</i> Who endorsed engaging in behavior or drugging IPV	<i>n (%)</i> Who denied engaging in behavior or drugging IPV
Past-year Binge Drinking (Days)	3,907	0	365	2.19	2.31	1,988 (64.2)	1,109 (35.8)
Illicit Drug Use (Number of drugs used excluding marijuana)	4,086	0	12	0.25	0.87	521 (12.8)	3,565 (87.2)
Marijuana Use (Used or Did not use)	4,086	-	-	-	-	1,653 (40.5)	2,433 (59.5)
Sensation Seeking	4,086	1.00	5.00	3.36	0.90	-	-
Drugging Victimization	4,086	-	-	-	-	766 (18.7)	3,320 (81.3)
Drugging Perpetration	4,086	-	-	-	-	118 (2.9)	3,968 (97.1)

Note: Total sample size $N = 4,086$.

Table 3.2

Endorsement rates of drugging victimization items by drugging victims.

Victims <i>N</i> = 766	Drugging Victimization Item				
	Has SOMEONE ever...				
	Put alcohol into your non- alcoholic drink without your knowledge?	Put a different drug in a joint, blunt, or vaporizing device, without your knowledge, that you smoked?	Put a drug into your food or beverage without your knowledge?	Given you a drug or alcohol without you knowing you were getting the drug or alcohol, so that it would be easier to have sex with you?	Told you they were giving you one kind of drug but gave you a different kind of drug, such as ecstasy instead of aspirin?
<i>n</i> of Victims who endorsed the item	350	338	315	270	239
% of Victims who endorsed the item	45.7%	44.1%	41.1%	35.2%	31.2%

Table 3.3
Drugging victimization rates by demographic variables.

	Gender				Race/Ethnicity		Sexual Orientation	
	Men <i>N</i> (%)	Women <i>N</i> (%)	Trans/gender queer <i>N</i> (%)	Other <i>N</i> (%)	White <i>N</i> (%)	Non-White <i>N</i> (%)	Straight/ Heterosexual <i>N</i> (%)	LGBO <i>N</i> (%)
Victims	275 (18.6)	480 (19.0)	10 (14.5)	1 (11.1)	533 (20.0)	233 (16.5)	136 (17.8)	558 (21.7)
Non-Victims	1,201 (81.4)	2,052 (81.0)	59 (85.5)	8 (88.9)	2,137 (80.0)	1,183 (83.5)	2,570 (82.2)	750 (78.3)

Note: LGBO = Lesbian, gay, bisexual, or other.

Table 3.4

Proportions of drugging victims and non-victims who engaged in past-year risk behaviors.

	Participants who binge drank in the past year	Participants who used marijuana in the past year	Participants who used at least one illicit drug in the past year
Drugging Victims <i>N</i> = 766			
<i>n</i> (%)	480 (62.7)	439 (57.3)	200 (26.1)
Non-Victims <i>N</i> = 3,320			
<i>n</i> (%)	1,508 (40.5)	1,214 (36.6)	321 (9.7)

Table 3.5

Endorsement rates of drugging perpetration items by drugging perpetrators.

		Drugging Perpetration Item				
		Have YOU ever...				
Perpetrators <i>N</i> = 118		Put alcohol into someone's non- alcoholic drink without their knowledge?	Told you they were giving you one kind of drug but gave you a different kind of drug, such as ecstasy instead of aspirin?	Put a different drug in a joint, blunt, or vaporizing device, without their knowledge, that someone smoked?	Put a drug into someone's food or beverage without their knowledge?	Given you a drug or alcohol without you knowing you were getting the drug or alcohol, so that it would be easier to have sex with you?
<i>n</i> of Perpetrators who endorsed the item		58	48	41	41	38
% of Perpetrators who endorsed the item		63.0%	52.2%	44.6%	44.6%	41.3%

Table 3.6
Drugging perpetration rates by demographic variables.

	Gender				Race/Ethnicity		Sexual Orientation	
	Men <i>N</i> (%)	Women <i>N</i> (%)	Trans/gender queer <i>N</i> (%)	Other <i>N</i> (%)	White <i>N</i> (%)	Non-White <i>N</i> (%)	Straight/ Heterosexual <i>N</i> (%)	LGBO <i>N</i> (%)
Perpetrators	68 (4.6)	48 (1.9)	2 (2.9)	0 (0.0)	76 (2.8)	42 (3.0)	83 (2.7)	35 (3.7)
Non-Perpetrators	1,408 (95.4)	2,484 (98.1)	67 (97.1)	9 (100.0)	2,594 (97.2)	1,374 (97.0)	3,045 (97.3)	923 (96.3)

Note: LGBO = Lesbian, gay, bisexual, or other.

Table 3.7

Proportions of drugging perpetrators and non-perpetrators who engaged in past-year risk behaviors.

	Participants who binge drank in the past year	Participants who used marijuana in the past year	Participants who used at least one illicit drug in the past year
Perpetrators <i>N</i> = 118			
<i>n</i> (%)	81 (68.6)	69 (58.5)	46 (39.0)
Non- Perpetrators <i>N</i> = 3,968			
<i>n</i> (%)	1,907 (48.1)	1,584 (39.9)	475 (12.0)

Table 3.8

Logistic Regression for Mediation of Sensation Seeking between Risk Behaviors and Victimization: Drugging victimization regressed on demographic variables, risk behaviors, and average sensation seeking score.

Predictor (X)	β	SE	z-value	Sig.	Effect of M on X predicting Y	95% C.I. for Effect of M on X predicting Y		% Mediation
						Lower	Upper	
Gender	.143	.100	1.431	.152	-	-	-	-
Sexual Orientation	.068	.110	.618	.537	-	-	-	-
Race/Ethnicity	-.146	.101	-1.455	.146	-	-	-	-
Illicit Drug Use*	.196	.047	4.150	<.001*	.040*	.024	.058	20.16*
Marijuana Use*	.353	.102	3.454	.001*	.100*	.063	.145	28.42*
Binge drinking*	.094	.020	4.645	<.001*	.019*	.012	.028	20.17*
Average Sensation Seeking Score*	.348	.061	5.699	<.001*	-	-	-	-

Note. * $p < .05$; Model $\chi^2(7, 3,043) = 166.00^*$; Gender coded as 0 = Man, 1 = Woman; Sexual Orientation coded as 0 = Heterosexual, 1 = LBGO (i.e., lesbian, gay, bisexual, or other); Race/Ethnicity coded as 0 = White, 1 = non-White; Marijuana Use coded as 0 = Has not used marijuana, 1 = Has used marijuana.

For mediation analyses, Y = Drugging Victimization, M = Average Sensation Seeking Average Score

Table 3.9

Logistic Regression for Mediation of Sensation Seeking between Risk Factors and Perpetration: Drugging perpetration regressed on demographic variables, risk behaviors, and average sensation seeking score.

Predictor (X)	β	SE	z-value	Sig.	Effect of M on X predicting Y	95% C.I. for Effect of M on X predicting Y		% Mediation
						Lower	Upper	
Gender*	-.715	.224	-3.199	.001*	-.024	-.075	.020	3.30
Sexual Orientation	.052	.263	.196	.845	-	-	-	-
Race/Ethnicity	.099	.227	.435	.664	-	-	-	-
Illicit Drug Use*	.316	.070	4.518	<.001*	.016	-.014	.050	5.10
Marijuana Use	.050	.245	.203	.839	-	-	-	-
Binge drinking*	.108	.043	2.529	.011*	.007	-.001	.025	6.49
Average Sensation Seeking Score	.142	.142	1.000	.317	-	-	-	-

Note. * $p < .05$; Model $\chi^2(7, 3,043) = 55.80, p < .001$; Gender coded as 0 = Man, 1 = Woman; Sexual Orientation coded as 0 = Heterosexual, 1 = LBGO (i.e., lesbian, gay, bisexual, or other); Race/Ethnicity coded as 0 = White, 1 = non-White; Marijuana Use coded as 0 = Has not used marijuana, 1 = Has used marijuana.

For mediation analyses, Y = Drugging Perpetration, M = Average Sensation Seeking Average Score

CHAPTER 4

DISCUSSION

Overview

As the study of drugging IPV is still nascent, the present study sought to further the field's understanding of the act. In the present sample, a higher prevalence of drugging victimization was observed compared to previous studies (Coker et al., 2016; Butler et al., 2021; Lasky et al., 2017; Swan et al., 2017; Warner et al., 2018). Similarly, the prevalence of drugging perpetration was slightly higher than reported in extant literature (Coker & Bush, 2015; Lasky et al., 2017; Schramm et al., 2018; Swan et al., 2017). These higher rates of drugging IPV may be a result of the nuanced ways in which the present study measured drugging IPV. Specifically, as many prior studies have examined drugging that occurs only via drink-spiking and/or as means to sexually assault someone (Colyer & Weiss, 2018; Hamby, 2018), this survey's inclusion of items that take into account other ways in which someone may be drugged likely enabled the elucidation of previously obscure aspects of drugging. As previous studies have established the various distressing outcomes that result from drugging IPV (Swan et al., 2017; U.S. Department of Health and Human Services, 2019), the observed prevalence rates underscore that drugging is a wide-reaching social issue with grave consequences.

In addition to elucidating the rates at which drugging is experienced and perpetrated, the present study also sought to illuminate what participant characteristics are associated with the occurrence. Hypothesis 1 concerning predictors of drugging

victimization was made based on extant literature on drugging IPV, sensation seeking, and the lifestyle-routine activities theory (L-RAT) such that it was expected that being a woman, having a minority sexual orientation, engaging in high rates of binge drinking, illicit drug use, marijuana use, and having high levels of sensation seeking would significantly predict participants reporting drugging victimization. Further, it was expected that sensation seeking would mediate the ability of risk behaviors to predict drugging victimization. This hypothesis was partially supported as, contrary to expectations and previous literature (Schramm et al., 2018; Swan et al., 2020), the present model did not yield differences in drugging victimization based on gender, race, or sexual orientation. However, in line with expectations, the model indicated that engaging in risky lifestyle-routine behaviors (i.e., illicit drug use, marijuana use, and binge drinking) was associated with significantly higher odds of drugging victimization. Additionally, high levels of trait sensation seeking related to higher odds of drugging victimization. What is more, sensation seeking significantly mediated the effect of risk behaviors on drugging victimization, indicating that those who possess higher levels of the trait may be at a uniquely increased risk for experiencing drugging victimization.

Hypothesis 2 posited that being male, engaging in binge drinking, illicit drug and marijuana use, and having high levels of sensation seeking, would predict perpetrating drugging and that sensation seeking would mediate the effect of risk behaviors on drugging perpetration. This hypothesis was also partially supported. Contrary to expectations, sensation seeking did not significantly relate to participants odds of drugging perpetration. Further, sensation seeking did not significantly influence the relationships between other predictors and drugging perpetration. Sensation seeking

involves the seeking of first-hand novel and intense experiences. As such, it is plausible that this result reflects that drugging someone, a second-hand experience, would not provide a novel and intense effect, and therefore, would not be appealing to those high in the trait. Also against expectations, marijuana use was not significantly related to drugging perpetration. However, in line with expectations, results indicated that being male, illicit drug use, and binge drinking were, in fact, related to significantly higher odds of participants reporting that they had drugged someone.

On the whole, the results of the present study indicate that risky lifestyle and routine activities of binge drinking and substance use are predictors of both drugging victimization and drugging perpetration. The only demographic variable that significantly related to drugging IPV was being male, which was associated with increased odds of reporting drugging perpetration. Particularly noteworthy, analyses elucidated that the seeking of novel and intense sensations and experiences appears to play a notable role in drugging victimization, as it directly significantly predicted victimization and significantly influenced the ability of other risk behaviors to predict victimization. This plausibly indicates that those who have a high inherent propensity to seek out novel and intense experiences may be particularly susceptible to engaging in such risky lifestyle and routine activities that are associated with an increased vulnerability to experience drugging victimization. Taking these results together, the present study indicates that risk behaviors may be more saliently related to drugging IPV than demographic variables. In other words, in line with the L-RAT, this study indicates that, rather than fitting specific demographic profiles, engaging in specific behaviors plays a notable role in the

occurrence drugging IPV, and the role it plays in drugging victimization is amplified by trait sensation seeking.

Limitations

The current study is not without limitations. As it cannot be determined whether risk behaviors started before or after participants were drugged or drugged someone, only non-directional associations between the variables can be determined. Additionally, as previously mentioned, several participants commented that although they had experienced a described drugging scenario, it was clear that it happened accidentally. Because researchers wanted to understand aspects of intentional drugging instances, answers to the respective item were excluded from data analysis. To prevent having to exclude data in the future, it may benefit researchers to make the intent of the scenario more central in the drugging prevalence items.

Future Directions

Despite the limitations of the current study, its results add to the sparse literature on drugging IPV. Specifically, this study underscores that drugging may occur much more often than popularly believed. It also underscores that, contrary to popular conception, people are drugged with more substances than just “roofies.” Further, as the results of this study implicate risk behaviors as salient predictors of drugging IPV, it seems imperative for prevention efforts to focus on addressing risk behaviors and elements of the environments in which drugging is most likely to occur (i.e., those in which binge drinking, illicit drug use, and marijuana use are normalized and therefore most likely to occur). Additionally, as this study implicates sensation seeking as playing a notable role in the risk that substance use behaviors pose for experiencing drugging

victimization, prevention efforts that target aspects of this intrinsic characteristic may be particularly efficacious in mitigating its occurrence. In this vein, it would be valuable for subsequent research to consider the role trait sensation seeking may play in the occurrence of other forms of IPV.

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APPENDIX A

COMPLETE SURVEY ITEMS

Demographic Questions

1. How old are you?
 - Under 18
 - 18
 - 19
 - 20
 - 21
 - 22
 - 23
 - 24
 - 25
 - 26
 - 27
 - 28
 - 29
 - 30
 - 31 or older
2. Are you currently enrolled or have you graduated from a two- or four-year college or university, excluding vocational, trade, or technical school?
 - Yes, currently enrolled (only group that goes to 3)
 - Graduated (skip to 4)
 - No (skip to 4)
3. (If yes, enrolled) What is your year in school?
 - First-year undergraduate
 - Second-year undergraduate
 - Third-year undergraduate
 - Fourth-year undergraduate

- Fifth-year or more undergraduate
 - Graduate or professional
 - Other, please specify: _____
4. (If graduated or no, skip from Q2) What is the highest level of schooling you have achieved? Check one:
- Some elementary, middle, or high school
 - High school graduate
 - GED
 - Vocational, trade, or technical school
 - Associate's degree
 - Some college
 - College graduate
 - Master's degree
 - Doctorate degree
 - Professional degree such as MD or JD
5. Which term do you use to describe your gender?
- Man
 - Woman
 - Trans/gender queer
 - Other
6. Which term do you use to describe your sexual orientation?
- Bisexual
 - Gay
 - Lesbian
 - Straight/heterosexual
 - Other (e.g., asexual, pansexual, queer, questioning)
7. Which term(s) do you use to describe yourself? (Check all that apply)
- White
 - Black
 - Hispanic
 - Latino/a/x
 - Asian or Pacific Islander
 - American Indian, Alaskan Native, or Hawaiian Native
 - Biracial or multiracial
 - Other _____

4-Item Brief Sensation Seeking Scale (BSSS-4)

8. Rate your agreement with the following statements on a scale of 1-5, with 1 being “strongly disagree” and 5 being “strongly agree”:
- I would like to explore strange places.
 - I like to do frightening things.
 - I like new and exciting experiences, even if I have to break the rules.
 - I prefer friends who are exciting and unpredictable.
9. Do you currently participate in varsity, club sports, or intramural athletic groups?
- Yes
 - No

Risk Behaviors

One drink of alcohol is defined as a 12 oz. can or bottle of beer or wine cooler, a 4 oz. glass of wine, or a shot of liquor straight or in a mixed drink.

Binge Drinking

10. On average, in the last 12 months, how many times have you had five or more drinks of alcohol in a single sitting? (If you did not drink alcohol, please enter 0.)
- _____ Number of Times

Marijuana & Illicit Drug Use

11. In the last 12 months, have you taken any of the following?
- Marijuana (e.g., blunt, joint, or vape)
 - Concentrated marijuana (e.g., 710, wax, honey oil, budder, dabs)
 - Edibles containing marijuana or concentrate
 - K2 or Spice
 - Cocaine (including powder, crack, or freebase)
 - Amphetamines or methamphetamines (e.g., speed)
 - Heroin
 - LSD or acid
 - Hallucinogens (such as LSD or Mushrooms)
 - Bath salts
 - Ecstasy (MDMA)
 - Inhalants
 - Gamma Hydroxybutyric Acid (GHB)
 - Rohypnol (Roofies)
 - Ketamine (Special K)

Drugging Questions

(No or yes; yes answers will skip to incident report questions; check all that apply)

The following questions ask about your lifetime experience.

Drugging Victimization

Has SOMEONE ever:

12. Misled you about the amount of alcohol in your alcoholic drink such that the drink had more alcohol than you thought?
13. Put alcohol into your non-alcoholic drink without your knowledge?
14. Put a drug into your food or beverage without your knowledge?
15. Put a different drug in a joint, blunt, or vaporizing device, without your knowledge, that you smoked?
16. Told you they were giving you one kind of drug, but gave you a different kind of drug, such as ecstasy instead of aspirin?
17. Given you a drug or alcohol, without you knowing you were getting the drug or alcohol, so that it would be easier to have sex with you?

Drugging Perpetration

Have YOU ever:

18. Misled someone about the amount of alcohol in their alcoholic drink such that the drink had more alcohol than they thought?
19. Put alcohol into someone's non-alcoholic drink without their knowledge?
20. Put a drug into someone's food or beverage without their knowledge?
21. Put a different drug in a joint, blunt, or vaporizing device, without their knowledge, that someone smoked?
22. Told someone they were giving you one kind of drug, but gave them a different kind of drug, such as ecstasy instead of aspirin?
23. Given someone a drug or alcohol, without them knowing they were getting the drug or alcohol, so that it would be easier to have sex with them?

Victimization Incident Report Questions

24. How many times has someone _____ (fill in with type of drugging endorsed)?
(Repeat 1 and 2 for each type of drugging endorsed)
 - _____ Number of times

The following questions ask about the experience you selected as having the most severe impact on your life.

25. How old were you when this happened?
 - _____-years-old

Perpetration Incident Report Questions

26. How many times have you _____ (fill in with type of drugging endorsed)?
(Repeat 1 and 2 for each type of drugging endorsed)

- _____ Number of times

The following questions ask about the experience you selected as recalling most clearly.
(Leave out Q3 and preamble if person only selected one type of drugging and/or only specified a single incident.)

27. How old were you when this happened?

- _____-years-old