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Substance use among women receiving post-rape medical care, associated post-assault concerns and current substance abuse: Results from a national telephone household probability sample

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Abstract

Objective—To examine post-rape substance use, associated post rape medical and social concern variables, and past year substance abuse among women reporting having received medical care following a most recent or only lifetime incident of rape.

Method—Using a subsample of women who received post-rape medical care following a most recent or only rape incident (n=104) drawn from a national household probability sample of U.S. women, the current study described the extent of peritraumatic substance use, past year substance misuse behaviors, post-rape HIV and pregnancy concerns, and lifetime mental health service utilization as a function of substance use at time of incident.

Results—One-third (33%) of women seeking post-rape medical attention reported consuming alcohol or drugs at the time of their rape incident. Nearly one in four (24.7%) and one in seven (15%) women seeking medical attention following their most recent rape incident endorsed drug (marijuana, illicit, non-medical use of prescription drugs, or club drug) use or met substance abuse criteria, respectively, in the past year. One in twelve (8.4%) women reported at least monthly binge drinking in the past year. Approximately two-thirds of women reported seeking services for mental health needs in their lifetime. Post-rape concerns among women reporting peritraumatic substance use were not significantly different from those of women not reporting such use.

Conclusions—Substance use was reported by approximately one-third of women and past year substance abuse was common among those seeking post-rape medical care. Implications for service delivery, intervention implementation, and future research are discussed.

Keywords

Substance Use; Rape; Post-Rape Medical Care; HIV Concerns

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1.1 Scope of the Problem

National data estimate that nearly 1.1 million women experience a rape annually, with the lifetime prevalence of rape being nearly one in five (18%; Kilpatrick, Resnick, Ruggiero, Conoscenti, & McCauley, 2007). Among samples of community women, an estimated 35%–55% of rape victims report alcohol use at the time of assault, 2% of rapes involve victim use of other substances, and approximately one in five cases of rape involve alcohol or drug facilitation or incapacitation (Brecklin & Ullman, 2010; Kilpatrick et al, 2007; Testa, 2004; Ullman, 2003). Preliminary evidence suggests that substance use, particularly to the point of incapacitation, at the time of assault is associated with chronically higher levels of use that may be indicative of sustained problematic abuse (McCauley et al., 2010; Resnick et al., 2012; Testa et al, 2003).

1.2 Post-Rape Medical Examination

National data estimate that one-fourth (26.2%) of adult rape victims seek post-assault medical care, the majority of which is received within 72 hours of the incident (Resnick et al, 2000). Receipt of post-rape medical care is frequently associated with formal reporting of the rape incident; however, concerns regarding sexually transmitted diseases (STD) infection and pregnancy are associated with women seeking post-rape medical care (Hanson et al., 2001; Logan et al., 2007; Resnick et al, 2000; Zinzow et al., 2012).

Zinzow and colleagues (2012) used data from the same large, household probability sample of women as the present study to examine predictors of post-rape medical care among a sub-sample of women who were 14 years or older when they were raped (n=445). Although only 21% (n=93) reported seeking medical care following their most recent or only rape incident, significant predictors of seeking medical care included black race, rape-related injury, concerns about sexually transmitted diseases, pregnancy concerns, and reporting to the police/authorities. Experiences involving drug or alcohol facilitation or incapacitation were not uniquely significantly associated with seeking medical care after controlling for forcible rape elements and other peritraumatic predictors (Zinzow et al. 2012). That study also found that a majority of victims seeking medical care reported concerns about HIV and other STDs, other health and concerns regarding blame or social disclosure. Nursing staff and victim advocates have long noted substance use as a vulnerability issue for victims, and have identified the medical exam setting as a potentially unique opportunity to address these issues that may impact victims' quality of life and subsequent risk for revictimization (Ledray, 2008; Slaughter, 2000).

The Sexual Assault Nurse Examiner (SANE) program was created across the U.S. in an attempt to enhance care provided to women during post-rape medical examinations. The SANE program deploys a team of trained nurses on call for 24-hours per day to be the first responders in providing medical care and crisis intervention to rape victims who seek services at Emergency Departments or other specialized service delivery sites (see Campbell, Patterson, & Lichty, 2005 for review). Guidelines for the post-rape medical treatment of victims typically include the following components: forensic procedures intended to gather evidence, education and prophylaxis against STDs/HIV, provision of emergency contraception, supportive counseling, and provision of referrals for further physical and mental health services (Young, Bracken, Goddard, & Matheson, 1992). Despite the existence of these guidelines for best practice, medical examination experiences of rape victims vary widely across the country. The majority of victims' care (between 70% and 82%) includes forensic evidence collection (Campbell, 2006; Campbell & Bybee, 1997). Provision of additional services, particularly those related to STI and substance abuse screening and intervention, has traditionally been less consistently provided (Amey &

Bishai, 2002). For example, Ciancone and colleagues (2000) collected mail survey data from 61 Sexual Assault Nurse Examiner programs in the U.S. regarding standard service provision and found that 90% or more reported consistent provision of STI prophylaxis, pregnancy testing, and emergency contraception; however, far fewer reported consistent HIV testing (26%), alcohol screening (14%), and toxicology/drug screening (10%).

Research regarding the magnitude of assault related substance use as potential pre-existing and post assault use and abuse is warranted. Using a sample of 268 recent victims of sexual assault who sought a post rape forensic medical exam, Resnick and colleagues (2012) examined prevalence of reported alcohol and drug use at the time of assault and associations between peritraumatic use and recent prior use, as well as subsequent drug and alcohol abuse over the course of a 6 month follow-up assessment. They found that 54% percent reported alcohol use and 11.9% reported marijuana use at the time of the incident and such use was significantly associated with recent prior use and subsequent use and abuse. Consistent with previous findings (Resnick et al., 2007), found that a brief intervention targeting reduced post assault avoidance and alternative strategies to reduce substance use as a potential coping mechanism was associated with reduced marijuana use post-assault, controlling for use in the 6 weeks prior or at the time of assault. Findings were discussed in terms of recommendations for implementation of and research related to screening, brief intervention, and referral to treatment related to substance use and abuse in this population (e.g., Madras et al., 2009).

1.3 Aims of Current Study

The current study aims to extend this line of research, as well as prior research from the same large household probability sample studying predictors of post-rape medical care (Zinzow et al., 2012). In contrast to Zinzow and colleagues' examination of predictors of post-rape medical care, the current study describes the extent of peritraumatic substance use and past year substance misuse behaviors among a national household probability sample of rape victims who reported receiving medical care following their rape experience. In addition, the current study examined post-rape HIV and pregnancy concerns, as well as lifetime mental health service utilization as a function of substance use at time of incident.

2. Method

2.1 Participants

Participants in the current study were selected from a larger household probability sample of 3,001 women residing in households with working residential telephones in the United States. Random digit dial methodology (described in more detail in Kilpatrick et al, 2007) was used to recruit from two population samples: a national cross-section of 1,998 women aged 18–34 and a national cross-section of 998 women aged 35 and older. Five women refused to provide their age. Women endorsing a lifetime experience of completed rape (N=526), defined as an unwanted sexual act involving oral, anal, or vaginal penetration through use of force, threat of force, or in which the victim was physically injured, or due to voluntary or involuntary consumption of alcohol or drugs to the point of intoxication, passing out, and/or inability to control behavior, were queried further regarding incident characteristics and outcomes for both their most recent/only and first incident rape. To reduce recall bias, only women reporting a most recent (or only) qualified rape incident were examined in the current study. These women were also asked whether they sought medical care by the following question: Did you receive medical attention after the incident? The sample used for primary analyses in the current study consists of the 104 women who said yes in response to this question. Rape victims who reportedly sought medical care were aged 18 to 61 years, with a mean age of 38 (SD=12.68) years of age. They were predominantly

Caucasian (64.30%) or African American (27.10%), with fewer Hispanics (4.00%) or Native Americans (3.60%). The modal household income for the sample was between $20,000 and $40,000 per annum.

2.2 Measures

The survey included assessment of demographic information (age, race/ethnicity, and income), post-rape medical concerns, peritraumatic substance use, past year substance misuse, and lifetime mental health service utilization.

Peritraumatic substance use was assessed via a series of questions regarding women's use of alcohol and/or drugs at the time of the rape. Women were asked if they had consumed any drugs or alcohol at the time of the incident. If a woman responded 'yes,' she was asked the following questions:

1. Did the incident involve any alcohol use on your part, only drug use on your part, or some use of both alcohol and drugs?
2. Did you drink alcohol because you wanted to, did the person(s) who had sex with you deliberately try to get you drunk, or both?
3. Did you take drugs because you wanted to, did the person(s) who had sex with you deliberately give you drugs without permission, or both?
4. Which drugs were taken?
5. When this incident happened were you passed out from drinking or taking drugs?
6. Were you awake but too drunk or high to know what you were doing or control your own behavior?

Past year substance misuse assessed regular binge drinking, non-experimental marijuana use, illicit drug use, any drug use, and substance abuse. Past year *binge drinking* was defined as consumption of five or more drinks of an alcoholic beverage within a day with at least monthly frequency (at least 12 or more days within the past year). To assess binge drinking, women were asked to estimate the number of days in the past 12 months that they consumed five or more drinks of alcoholic beverages in a sitting. This definition approximates the NIAAA definition for "binge drinking (NIAAA, 2004). *Non-experimental use of marijuana* was defined as endorsement of use on four or more occasions in the past year, approximating a level of use considered significant by the Diagnostic Interview Schedule (DIS; Robins, Helzer, Cottler, & Goldring, 1988) substance use screen and consistent with previous studies examining violence related outcomes (e.g., Kilpatrick, Acierno, Resnick, Saunders, & Best, 1997). Past year *illicit drug use* was assessed by asking women if, in the past year, they had used the following illicit or club drugs: cocaine, PCP, heroin, inhalants, MDMA, GHB, Ketamine, Rohypnol, Methamphetamine, or hallucinogens. *Any drug* use was a composite measure assessed by asking a series of questions regarding whether women had used, at least once in the past year, an array of substances including, marijuana, illicit drugs, non-medical use of prescription drugs, and club drugs such as Ketamine and GHB. Finally, past year *substance abuse* was assessed using the substance use module from the National Women's Study interview. Approximating the criteria for abuse set forth by the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed; *DSM-IV*; American Psychiatric Association, 1994, see Kilpatrick et al., 1997), substance abuse was assessed via a series of questions regarding the frequency of distressing experiences related to use of alcohol, marijuana, illicit drugs, club drugs or non-medical use of prescription drugs that occurred within the past 12 months (see Kilpatrick et al., 2000 for more detail). To meet criteria for abuse, women had to endorse at least one of the following negative consequences of use assessed by the DSM-IV: Trouble with employers, co-workers, teachers, or

classmates; difficulties of any kind with friends; being criticized by a family member; driving a car, boat, or other motor vehicle after having too much to drink or high after using drugs; being charged with a DWI or DUI offense; getting into trouble with police; having an accident in a car; having an accident at their home.

Post-rape concerns were assessed via a series of questions that asked: "After the incident we have been discussing how concerned were you about: getting an STD other than AIDS or HIV; getting AIDS or HIV; and getting pregnant as a result of the assault." Women responded using a Likert scale that ranged from 1 (extremely concerned) to 4 (not really concerned).

Lifetime mental health Service utilization was assessed by the following question: "People sometimes seek counseling help from professionals after they have stressful experiences or when they have emotional problems. Have you ever contacted a professional for help with emotional problems?" Women responding affirmatively were asked to identify the type of professional (i.e., medical doctor, priest/minister/rabbi, and psychiatrist/psychologist/social worker/therapist) from whom they received services. Finally, women who did not seek professional help were asked, "What is the main reason you did not seek professional help?"

Participant distress was assessed at the end of the interview by asking, "First, were any of the survey questions emotionally upsetting to you?" Participants who responded with a yes were asked, a second question, "Before I go on, I want to make sure that you are feeling okay. Are you still feeling emotionally upset, or are you okay now?" Those who said that they were still upset were then asked if they would like to be called by a counselor. If a participant said they wanted to be called by a counselor they were asked if they wished to be called that day, the next day/during regular business hours.

2.3 Procedure

Women were interviewed via telephone using a computer-assisted telephone interviewing (CATI) system that was designed to reduce interviewer error in data collection and entry. Female interviewers were highly trained and quality-monitored employees of Abt SRBI, a large survey research firm with decades of experience in conducting telephone interviews regarding sensitive topics. If a residence had more than one female resident eligible for study participation, the most recent birthday selection method was used. When possible, women were interviewed immediately upon determination of eligibility/selection. If this was not possible, appointments were scheduled or blind callbacks (a minimum of five) were made at different times of day and days of the week prior to abandonment of a case.

Prior to initiating the interview, participants provided oral consent. Two steps were taken to promote respondent privacy: (1) women were asked if they were in a situation in which they could be assured of privacy and, if not, were offered an opportunity to complete the interview at a more convenient and private scheduled callback time, and (2) the interview was designed to use primarily closed-ended questions that require yes, no, or other one-word responses devoid of major content. Completed interviews averaged approximately 20 minutes. All procedures and materials received IRB approval from a major medical university.

3. Results

3.1 Peritraumatic Substance Use

One-third (33.0%) of women seeking post-rape medical attention reported consuming alcohol or drugs at the time of their rape incident. As indicated in Table 1, the majority of these women reported alcohol use only (71.0% of those using any substance), consumed by

of their own volition (64.3% of those endorsing peritraumatic alcohol use). Whereas a notable minority of rape victims endorsing peritraumatic substance use reported being passed out from use (38.5%), a far larger portion of these women (65.3%) reported being awake but too drunk or high to control their behavior or be aware of what they were doing.

3.2 Past Year Substance Misuse

Past year prevalence for substance use and abuse variables are presented in Table 1. Nearly one in four women (24.7%) seeking medical attention following their most recent rape incident endorsed drug (marijuana, illicit, non-medical use of prescription drugs, or club drug) use in the past year. Further, approximately one of every seven women (15.0%) seeking medical attention subsequent to their most recent rape met criteria for past year substance abuse. Women reporting peritraumatic substance use were significantly more likely than those not reporting peritraumatic substance use to report substance abuse in the year prior to the study, χ^2 [1, N=104] = 8.99, p<.01.

3.3 Post-Rape Concerns

A substantial majority of women who sought post-rape medical attention and had peritraumatic substance use also were either extremely or somewhat concerned about getting an STD other than HIV/AIDS (64.7%), getting HIV/AIDS (57.6%), and getting pregnant (51.4%) as a result of the rape. Rape victims reporting peritraumatic substance use were statistically equivalent to rape victims not reporting peritraumatic use in their concerns regarding STD contraction (χ^2 [1, N=102] = 0.09, ns), HIV/AIDS contraction (χ^2 [1, N=99] = 0.12, ns), and pregnancy as a result of the rape (χ^2 [1, N=104] = 1.85, ns).

3.4 Service Utilization

Two out of every three rape victims (66.4%) endorsing receipt of post-rape medical attention also reported contacting a professional for help with emotional problems at some point in their lifetime. Table 1 provides prevalence for specific provider types. Among those not seeking lifetime mental health services, nearly half noted that they did not seek help because they didn't need services (46.7%), whereas nearly one-third of women (32.7%) identified not being able to afford help as their primary reason for not utilizing services. Women reporting peritraumatic substance use were statistically as likely as women not reporting use to endorse lifetime service utilization, χ^2 [1, N=104] = 1.17, ns.

3.5 Participant Distress

Approximately one-third (35.1%) of this sample of medical service seeking women said yes in response to the question asking whether any questions were emotionally upsetting. However, only one participant (0.7% of the sample) said she was still feeling emotionally upset at the end of the interview and no one requested a call from a counselor. Those who reported peritraumatic substance use did not differ from non-users in terms of responses to these questions.

4. Discussion

4.1 Current Findings

The current study examined, within a national telephone household probability sample, peritraumatic substance use and associated characteristics among women who reported that they sought medical care following a rape experience. One in seven women reporting receipt of post-rape medical care following their most recent or only rape also met criteria for drug use in the year prior to the interview (2006). An even greater proportion, one in four, met

criteria for past year substance abuse. Of interest, peritraumatic substance use was significantly associated with past year history of substance abuse.

These findings may be conservative estimates of substance use among women seeking post-rape medical care as a result of sampling and screening methods. It is likely that some rape victims seeking post-rape care are not captured by this household probability sampling methodology (e.g. homeless rape victims). In addition, since post rape care may have included primary care physician or other non-hospital or specialized programs for rape victims results may not generalize to all those seeking services from a sexual assault examiner program. Definitions of rape required report of unwanted penetration by the respondent which would have excluded cases of drug or alcohol facilitated or incapacitated rape in which penetration did occur but the victim was unaware/unsure of whether penetration occurred. In contrast, victims experiencing rape due to drug or alcohol facilitation or incapacitation can seek medical care under those circumstances. In addition, screening questions used to assess substance use involved rape experiences specifically referenced substance use to levels of being “very high, intoxicated, or passed out” and may, therefore, not have been sensitive to women using at the time of assault, but not to the level of incapacitation. Conversely, an advantage of the current study is that women seeking post-rape medical care outside of emergency department programs may have been included in the current study that would not otherwise be participants in ED type studies. In addition, the current study sample is not restricted to a specific geographic area as are typical ED based studies. Finally, behaviorally specific questions within the current study protocol (Kilpatrick et al., 2007) asking whether women passed out due to substance use *or* were so intoxicated that they were unaware of or could not control their behavior provided unique information about distinct types of impairment related to substance use, either of which would meet criteria as a legal type of rape due to impairment (Kilpatrick, 2004).

Consistent with the possibility that estimates of substance use may be conservative, some studies of rape victims seeking post rape medical care in the ED setting indicate higher prevalence of rape related substance use, (most commonly alcohol), among approximately 50% of these women (Avegno et al., 2009; Resnick et al., 2012). In addition, relatively higher prevalence of illicit drug use at time of assault has also been reported among these medical care seeking samples (Avegno et al., 2009; Resnick et al., 2012). Alternatively, differences may also relate to factors associated with seeking ED based care post-rape. Consistent with previous research utilizing stringent definitions of incapacitated and drug or alcohol facilitated assault (Kilpatrick et al., 2007; McCauley et al, 2010; Testa et al, 2003), women who reported peritraumatic substance use in the current study were significantly more likely to report recent substance abuse.

Whereas the current study relied on women’s recall of their substance use at the time of assault and examined associations between this peritraumatic use and recent (past year) substance abuse, Resnick and colleagues (2012) recently examined longitudinal trajectories of alcohol and marijuana use and abuse as a function of peritraumatic substance use among a sample recruited from the ED based medical exam setting. Across approximately 6 months of post-exam follow-up, more than one in four women (28%) met criteria for alcohol abuse and more than one in eight women (13.4%) reported marijuana abuse. Peritraumatic substance use was positively associated with use and abuse at follow-up. Similarly, Kaysen and colleagues (2006) found that incapacitated rape among college students was associated with higher rates of alcohol use and abuse at pre and post-rape time periods assessed as compared to those who did not experience incapacitated rape.

Additionally, a majority of the current sample reported seeking services from medical and mental health professionals for emotional problems. However, nearly one-third of rape

victims had not accessed mental health services. Although the most frequent reason given for not seeking psychological services in the current study was that they were “not needed,” nearly one-third of women not seeking help for emotional problems reported being unable to afford needed services and nearly one in twelve stated that they “did not know how to find help.” Further, it remains unknown if rape victims with substance abuse/misuse sought and received appropriate assistance for these issues or received services to address other mental health issues. As previously reported, a significant majority of women report postrape concerns related to HIV, other STDs and pregnancy (Zinzow et al., 2012). Our findings indicate that rape victims endorsing peritraumatic substance use were as likely to endorse these post-rape concerns as those who did not use substances at the time of assault.

Taken together, findings of the current study indicate potentially missed opportunities to intervene, specifically regarding substance abuse behaviors, with appropriate referrals, or low-cost technology assisted (or administered) interventions (e.g., Vaca, Winn, Anderson, Kim, & Arcila, 2011). The post rape medical exam setting provides a potential opportunity to reach a substantial segment of women who may not have had access to mental health services in the past and may benefit from such services. Further, Screening, Brief Intervention, and Referral to Treatment (SBIRT) intervention models have demonstrated success among other populations (i.e., emergency department populations) exposed to potentially traumatic events (Broyles, Rosenberger, Hanusa, Kraemer, & Gordon, 2012; Desy, Howard, Perhats, & Li, 2010; Madras et al., 2009; Vaca et al., 2011) and may be evaluated for efficacy as well as feasibility of application to the post rape medical examination setting. Such approaches should be implemented in ways that are sensitive to concerns about perceived blame on the part of sexual assault victims.

Findings related to participant distress indicated that approximately one-third reported being emotionally upset to any interview questions. However, all but one participant reported that they were no longer distressed at the end of the interview and no one requested any follow-up contact by a counselor. These data are consistent with previous reports using similar methods (e.g., Zajac et al., 2011). Thus, among rape victims who have experienced a most recent or only assault at any point in their lives, questions about rape incidents, assault related substance use and current functioning were feasible. Similar questions might be usefully asked of recent rape victims seeking post assault medical care. In addition, inclusion of questions specifically asking for feedback about assessment related to substance use and abuse may be helpful.

4.2 Limitations

Although the current study provides descriptive information regarding past year substance use, abuse and mental health service seeking characteristics of women seeking post-rape medical care, limitations should be noted. All data were collected via self-report telephone interviews, some women were excluded from the sampling frame. Given that participants had to have lived in a home with a landline at the time of the interview (2006), results may not generalize to women who are incarcerated, women in transient housing situations, or women in cell-phone only homes. Concerns regarding generalizability are lessened by US Census Bureau reports that approximately 9 of 10 women in the age range of interest had landlines in 2005 and 2006; however, future efforts should consider approaches that include cell-phone only homes. Whereas women could have received medical care in relation to a most recent (or only) rape incident occurring at any point in their lifetime, non-peritraumatic substance misuse was assessed for only the year prior to the interview. Thus, information about possible history of substance abuse prior to that timeframe was not assessed. The vast majority of women in our sample (99 of 104) reported that their most recent rape experience occurred prior to the past year. However, given the cross-sectional nature of data collection,

all associations between variables of interest are correlations; no time sequencing or statements implicating causality are possible.

Further, *lifetime* mental health service utilization (and reasons for not seeking services) was assessed, and women were not asked if their service utilization was related to their rape experience. As such, these variables should be interpreted as a proxy for broader access to mental health care rather than as post-rape service utilization. Women using substances at the time of assault but who did not self-report use to the point of intoxication, incapacitation, or loss of voluntary control and those who were intoxicated and were unaware of whether rape (unwanted penetration) occurred may have been underrepresented. Finally, a single question was used to assess post-rape medical care which may have included services received at an emergency department or other medical setting and which may have varied in content. Despite starting with a large, national household probability sample, the current study had a relatively low sample size given the small portion (less than one-fifth) of women who received post rape medical care following their most recent (or only) rape incident. Future research should include assessment of larger samples as well as assessment of substance use and abuse problems that may predate and/or occur following sexual assault.

4.3 Conclusions

Rape related substance use was observed among a significant subgroup (33%) of women seeking postrape medical care following a most recent/only rape within this national telephone household probability sample. Findings proffer consistent support, as suggested by Resnick and colleagues (2012), to the selection of the post rape medical exam setting as a potential venue to implement brief screening and risk-reduction programming regarding substance misuse and its relation to subsequent sexual assault risk. Consistent with data from that hospital based study, the current findings regarding prevalence of substance use and incapacitation due to substance use at time of assault suggest that education, assessment, and intervention if indicated related to reducing high risk substance use would be relevant to women seeking post-rape medical care.

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Highlights

- We examine peritraumatic substance use among women seeking post rape medical care
- We examine past year substance use and abuse associated with peritraumatic use
- We examine post rape health concerns associated with peritraumatic substance use
- Prevalence of lifetime mental health treatment seeking is reported

Table 1

Descriptive statistics regarding post-rape concerns, peritraumatic substance use, past year substance misuse, and lifetime service utilization among a national household probability sample of women (N=104) endorsing receipt of medical attention subsequent to a rape incident.

Variable	Percent Endorsed (n)
Peritraumatic Victim Substance Use	
Consumed any drugs or alcohol	33.0% (34)
Type of substance consumed	
Alcohol only	23.4% (24)
Drugs only	3.0% (3)
Both alcohol and drugs	6.2% (6)
Reason/motivation for drinking alcohol	
Because I wanted to drink	19.1% (20)
Because perpetrator tried to get me drunk	1.9% (2)
Both of the above	7.5% (8)
Reason/motivation for taking drugs	
Because I wanted to take drugs	5.2% (5)
Because perpetrator gave me drugs without permission	2.0% (2)
Both of the above	2.0% (2)
Drugs used during the rape1	
Marijuana	4.2% (4)
Tranquilizers	1.7% (2)
GHB	0.7% (1)
Narcotic	0.7% (1)
Narcotic and anxiolytic	0.7% (1)
Passed out from drinking or taking drugs	12.6% (13)
Awake but too drunk or high to control/be aware of own behavior	21.3% (22)
Past Year Substance Misuse	
Regular binge drinking	8.4% (9)
Non-experimental marijuana use	8.8% (9)
Illicit drug use	1.3% (1)
Prescription drug	7.4% (8)
Any drug use	24.7% (26)
Substance abuse	15.0% (16)
Mental Health Service Utilization	
Ever sought help for emotional problems	66.4% (69)
Contacted a medical doctor	46.8% (48)
Contacted a minister, priest, or rabbi	21.1% (22)
Contacted a psychiatrist, psychologist, social worker, therapist	62.4% (65)
Main reason for not seeking professional help (n=35)	
Didn’t need help	46.7% (16)
Didn’t know how to find help	7.7% (3)
Couldn’t afford help	32.7% (11)

Variable	Percent Endorsed (n)
Didn't trust professionals	7.6% (3)