A comparative study was conducted on the relationship between the frequency of sexual assault incidents and the relative accessibility of alcohol on two small liberal arts colleges and one larger public university. The alcohol policy varied among the colleges in that one was an alcohol free campus and another permitted drinking for students who were at least 21 years old. Three hypotheses were proposed: (1) campuses with liberal alcohol policies were expected to have a higher rate of sexual assault than campuses with conservative alcohol policies; (2) drinkers were expected to have experienced more sexual assault incidents; and (3) freshman were expected to report a higher incidence of unwanted intercourse. Counter to expectation, the results indicated that the small liberal arts college with a conservative alcohol policy had the highest rate of alcohol use, followed closely by the small liberal arts college with a liberal alcohol policy. The medium-size public university with a conservative alcohol policy was found to have the lowest rate of alcohol use. No significant differences in reports of sexual incidents were found among the campuses. Drinkers experienced more sexual incidents than nondrinkers. Contrary to the data analysis, juniors and seniors reported higher rates of experiencing unwanted intercourse than freshman and sophomores. (Contains 47 references.) (JDM)
The Relationship between Alcohol Use and Sexual Assault Incidents in Educational Settings

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Abstract

The present study examined the relationship between the frequency of sexual assault incidents and the relative accessibility of alcohol on different college campuses. Of the campuses selected, two were small liberal arts colleges and the other was a larger public university. The schools' samples varied in terms of alcohol policies (ranging from student enforced policies permitting drinking among students 21 and older to an alcohol free campus policy). Three hypotheses
were proposed: (1) campuses with liberal alcohol policies were expected to have a higher rate of sexual assault than campuses with conservative alcohol policies, (2) drinkers, as opposed to non-drinkers, were expected to have experienced more sexual assault incidents and (3) freshmen, compared to upperclassmen, were expected to report a higher incidence of unwanted intercourse. Counter to the expectations, the results indicated that the small liberal arts college with a conservative alcohol policy had the highest rate of alcohol use, followed closely by the small liberal arts college with a liberal alcohol policy; the medium size public university with a conservative alcohol policy was characterized by the lowest rate of alcohol use. No significant differences in reports of sexual incidents were found among the campuses. Between-group t-tests indicated that drinkers experienced more sexual incidents than the nondrinkers. No significant differences in unwanted intrusive sexual contact or unwanted intercourse were found between these groups, probably in part because reports of them were very rare. A trend in the data indicated that, contrary to the hypothesis, juniors and seniors reported higher rates of experiencing unwanted intercourse than the freshmen and sophomores.

Introduction

Donaldson (1990) defined rape as a sexual act imposed upon a nonconsenting partner; however, many still endorse the traditional notion that rape must include intercourse (penetration of the vagina by the penis). In order to distinguish between other unwanted sexual acts and intercourse, the term “sexual assault” has been developed. Sexual assault serves as an umbrella term for all
nonconsensual sexual activity, including oral and anal sex, touching of genitalia, and penetration of the vagina by foreign objects. This extends the range of possible victims and the manner in which someone can be sexually assaulted (Francis, 1996). However, to this day most state rape laws are still limited to cases involving penetration of the vagina with a penis. These laws typically include the following constraints: (1) the act (sexual) must be without the victim’s consent or against the victim’s will, (2) some degree of force, threat, or incapacitation must have been used in the act, and (3) penile-vaginal penetration must have taken place during the act (Estrich, 1987; as cited in Johnson & Sigler, 1997).

It must be noted that compared to older versions of rape laws, the new laws are considerably more inclusive and just toward the victim. It was not until the twentieth century that rape came to be defined as an act of violence committed against a woman who was the victim, and punishment was directed towards the male offender (Johnson & Sigler, 1997). By looking at earlier beliefs about male and female sexuality, one can obtain a better idea of how these views were established.

Acquaintance Rape

There are various stereotyped images of the relationship between the offender and the victim. It was once a commonly held belief that rape involved a woman and a stranger, who was usually a dark, suspicious looking man lurking in an alley. Traditional profiles of rapists or sexual offenders have identified the assailant as a stranger who is psychologically unstable. However, rape is often
committed by relatively normal perpetrators who know their victim and initially pose no threat to them. This phenomenon is referred to as “acquaintance rape” or “date rape”, and occurs between two people who know each other, including dates, friends, classmates, colleagues, etc. (Warshaw, 1988). More than 80% of the rapes that occur on college campuses are committed by someone who knew their victim; approximately 50% of these rapes are committed on dates (Koss, Gidycz & Wisniewski, 1987; as cited in Abbey, 1991). This is not surprising, given campus demographic features. Colleges and universities contain, in overwhelming numbers, people in the age group most susceptible to acquaintance rape: women 16 to 24 years old. In addition, assailants are also most likely to be under 25 years old (Benson, Charlton, & Goodhart, 1992). Rape is estimated to happen to 20% of college women, with first year students being the most vulnerable (Bohmar & Parrot, 1993).

Sorority Women and Rape

Studies have also found a high rate of sexual assault incidents to occur among sorority women on college campuses. After conducting extensive research on sorority women at a large university, Copenhagen and Grauerholz (1991) found high rates of victimization among their sample. Almost 50% of the 140 sorority women reported some form of sexual coercion, 24% had experienced attempted rape, and 17% were victims of complete rape (Copenhagen and Grauerholz, 1991). In their study of sorority women and rape, Rivera and Regoli (1987) found that sorority women experience a high incidence of sexual assault. Survey responses showed that 51% had experienced forced touching, 35% had
experienced an attempt at vaginal, oral, or anal penetration, and 17% had experienced full penetration.

Several years later, Kalof (1993) conducted an extensive study of sorority membership, rape supportive attitudes, and experience of sexual assault. Participants included 216 female students (10% of whom were sorority members) from a state university in upstate New York. Mail surveys consisted of questions concerning gender roles and experience with sexual coercion. Results indicated that sorority membership was associated with significantly higher rates of sexual victimization. Specifically, sorority members were more likely than non-sorority members to experience alcohol-related nonconsensual sex and physical coercion. Results also indicated that sorority membership was associated with conservative and traditional attitudes about gender, sexuality, and rape. Compared to other college women, sorority members held more stereotyped attitudes about the acceptance of interpersonal violence and the acceptance of rape myths.

Findings support the notion that women involved in Greek life are more likely than non-sorority students and less active members to experience attempted or completed rapes during fraternity functions or by fraternity members (Kalof, 1993). Fraternities have been found to support belief systems that validate gender stereotyping, male sexual aggression, and female victimization (Gwartney-Gibbs & Stockard, 1989). Some researchers have claimed that fraternity life is based on a long-standing tradition of “subordinating, violating, and using women” (Kalof, 1993). Fraternities emphasize traditional and stereotypical ideas of masculinity and femininity (Kalof, 1993). However, when studying alcohol use, athletic
participation, and fraternity affiliation, Koss and Gaines (1993) found that fraternity members did not score significantly higher on levels of sexual aggression. Instead, it was found that athletic participation was positively associated with sexual aggression. These findings are consistent with those of Frintner & Rubinson (1993) who found that athletes committed more sexual violence than non-athletes. High reports of sexual assault among athletes have been correlated with excessive alcohol consumption among intercollegiate athletes. Leichliter, Meilman, Presley, and Cashin (1998) conducted a study of over 50,000 students at 125 colleges and found that both male and female college athletes consume more alcohol than students who were not athletes. College athletes were also reported to be more likely to experience drinking-related consequences, display more high-risk behavior, and engage in more sexual violence than non-athletes.

**Alcohol and Rape**

As illustrated in the scenario above, alcohol plays a significant role in many sexual assault incidents on campus. Recent surveys reveal that just under half of all college students at times drink excessively, defined as five drinks for males and four for females in a single sitting (McGinn, 2000). Consumption of alcohol is one of the most frequently mentioned risk factors in studies of rape (Abbey, 1991; Muehledard & Linton, 1987). In their study of male sexual assault, Mezey & King (1989) found that thirteen of the 22 participants reported that their attacker had been drinking alcohol around the time of the assault; some of these attackers were described as heavily intoxicated. Of the remaining nine
cases, alcohol was suspected to be a factor in five. Studies have found that alcohol consumption by women at the time of the attack as one of the four strongest predictors of the likelihood of being raped (Harrington & Leitenberg, 1994). In addition, alcohol consumption frequently occurs in social settings in which sexual activity is a possible, and often desired, outcome (Abbey, 1991).

Previous research shows that more than half of the sexual assault incidents during dating situations involve the influence or use of alcohol by the perpetrator, and/or the victim (Abbey, 1991; Harrington & Leitenberg, 1994; Miller & Marshall, 1987). Koss (1988) found that 73% of the assailants and 55% of the victims had used alcohol or other drugs prior to the assault (as cited in Benson, Charlton, & Goodhart, 1992). Similarly, Miller and Marshall (1987) have found that of women who experienced unwanted intercourse, 50% had been drinking alcohol or taking drugs at the time. In a study conducted by Muehlenhard and Linton (1987), it was found that 26% of the men who acknowledged committing sexual assault on dates reported being intoxicated at the time of the assault. Another 29% reported being “mildly buzzed,” for a total of 55% who were admittedly under the influence of alcohol. In the same study, 21% college women who experienced sexual aggression on a date were intoxicated at the time of the assault. Another 32% reported being “mildly buzzed,” for a total of 53% who were under the influence of alcohol (Muehlenhard and Linton, 1987). Sexual assaults that involved alcohol are much more common, with one in six of the upper-class women reporting it (Koss et al., 1987; Miller & Marshall, 1987).

Effects of Alcohol
Both the physical and psychological effects of alcohol may contribute to this link between drinking and sexual aggression. Intoxication has been known to reduce a person’s inhibitions, physically impair a person’s cognitive abilities (such as reasoning and judgment), and also distort a person’s contact with reality (Groth, 1979; Collins & Messerschmidt, 1993). This negative effect on judgment may cause individuals to place themselves in situations or contexts in which the risk of violence is high. Therefore, someone under the influence of alcohol may not perceive or accurately assess the risk of violence, which would be apparent to someone who is sober (Collins & Messerschmidt, 1993). The cognitive impairment caused by alcohol consumption increases the risk of miscommunication during interpersonal interactions. It has been found that alcohol consumption increases vulnerability by decreasing resistance, and also may be related to consensual sexual activity that sometimes occurs immediately prior to sexual aggression (George, Gournie and McAfee, 1988; Harrington and Leitenberg, 1994).

Benson, Charlton, & Goodhart (1992) found that 60% of male students reported using alcohol to attain sexual contact. Many college men drink alcohol to experience the sense of uninhibitedness, power, and sexuality, which they have come to associate with drinking (Abbey, 1978 & 1982; Richardson & Hammock, 1991; as cited in Benson, Charlton, & Goodhart, 1992).

Alcohol Outcome Expectancies

However, the effects of alcohol consumption may not be entirely chemically based. Research has found some people to exhibit behavioral effects
of alcohol without consuming actual alcohol (Marx, et al., 2000). Beliefs about the outcomes associated with alcohol use are often referred to as “alcohol outcome expectancies”. Among these expectancies the thought that alcohol will reduce anxiety and increase sexual desire and pleasure (Seto, 1995).

“Expectancies frequently become self-fulfilling prophecies such that when people consume alcohol, they think and behave in ways that make it likely that the effects they experience will correspond to their initial expectations.” (Marx et al., 2000, p. 1057)

Although psychological expectancies can shape behavior, the behaviors people exhibit after drinking are also largely determined by the reinforcement that the person drinking expects to receive as a consequence of alcohol consumption (Marx, et al., 2000). If drinking is followed by others’ rewarding freer, more domineering behavior, the individual is more likely to use alcohol in the future to achieve this social facilitation.

Marx, et al. (2000) examined the relationship between sexual assault, alcohol consumption, and alcohol expectancy outcomes. Participants were 176 female college students, who were given three questionnaires. The first was used to assess drinking patterns. The second, a modified version of the Sexual Experience Survey (SES) developed by Messmar-Moore & Lange (1999), was used to assess one’s experience of coerced or forced sexual experience. Lastly, students were given a modified version of the Alcohol Effect Questionnaire (AEQ). The AEQ has two sub-scales, the Sexual Enhancement (SE), and Relaxation and Tension Reduction (TR), in which participants report how much
they agree or disagree with statements about how alcohol may affect them. This modified version of the AEQ was used to assess the positive and negative effects people expect alcohol to have on them. It was hypothesized that victims would report greater consumption of alcohol compared to non-victims. This hypothesis was confirmed. It was also hypothesized that alcohol outcome expectancies would be significantly different between groups of victims and non-victims. Results indicated that victims who reported alcohol to be involved in their victimization supported alcohol outcome expectancies to a greater extent than non-victims and victims who did not report alcohol as being involved in their victimization. These alcohol expectancies included beliefs about alcohol’s role in potential social and physical pleasure, alcohol’s role in potential powerful and aggressive behaviors, alcohol’s role in social expression, alcohol’s role in physical impairment, and alcohol’s role in careless unconcern (Marx et al., 2000).

Moreover, many students portray the use of alcohol as a temporary form of insanity, where acting out sexually can occur without fear of consequences (Roehrich & Kinder, 1991).

Therefore, occurrences of rape and perceptions of rape situations may be influenced by expectancies of alcohol-related behavior. One such expectancy is the widely held belief that alcohol makes people (and men, in particular) behave more aggressively (Brown, et al., 1980; as cited in Stormo et al., 1997). While this is a commonly held belief, more current findings have shown that alcohol expectancy does not necessarily result in a significantly increased amount of aggressive behavior in males.
Rosenhow & Bachorowski (1984) studied the behavioral effects of alcohol on the aggressive behavior in both men and women. According to expectancy theory, men expect to feel more powerful, sexual and aggressive after drinking alcohol (Abbey, 1991). Contrary to this belief, Rosenhow & Bachorowski (1984) found that men who believed they had consumed alcohol expressed less aggressive behavior than men who believed they had not consumed alcohol (Rauch & Bryant, 2000). Because neither of these groups actually consumed any alcohol, but instead was simply led to believe that the drink they consumed was alcoholic, the theory that behavior is solely a response to alcohol expectancies was unsupported. Rosenhow & Bachorowski (1984) also found that women expressed no difference in aggressive behavior due to differential alcohol expectancies.

When looking at alcohol outcome expectancies, Abbey, Ross, and McDuffie (1994) found that the results for women were mixed. It has been indicated by some studies that women who are intoxicated are more likely to feel “romantic, warm and sociable”; while other studies have found women to be more “social, powerful, and sexually uninhibited” after actually consuming alcohol (Abbey et al., 1994). Therefore, if these women expected alcohol to cause them to behave in a more outgoing, sexual, and uninhibited manner, then they may be more likely to behave this way when under alcohol’s influence. While both men and women consistently report that alcohol enhances sexuality, men tend to report greater sexual enhancement than women (Abbey & Harnish, 1995).
The differences in male and female alcohol outcome expectancies may be related to the gender difference in societal views of male and female drinking. Societal norms encourage men to develop positive expectancies about heavy drinking (e.g., tolerance of fraternity pranks committed while drunk), and women to develop negative expectancies about heavy drinking (e.g., being judged by others as being unladylike while drunk) (Abbey, 1991).

**Interpretation of Social Cues**

In addition, male-female interactions are consistently viewed differently by men and women. Not only are women who are under the influence of alcohol often viewed as behaving in a sexually promiscuous manner (Abbey & Harnish, 1995), but also men are more likely than women to interpret friendly behavior as indicating sexual interest (Abbey, 1982; as cited in Johnson & Sigler, 1997). Men are more likely than women to interpret a variety of verbal and nonverbal cues as evidence that a woman is interested in having sex with a man (Goodchilds & Zellman, 1984). If the woman is perceived to be more “sexually promiscuous”, she may in a sense be viewed as having “consented” to sexual activity (Stormo, et al., 1997; Kalof, 1993).

This may explain research findings indicating that when presented with a date rape scenario, college students attribute less responsibility to sexually aggressive male perpetrators and more responsibility toward female victims when both characters are portrayed as drunk (Richardson & Campbell, 1982). Best and Demmin (1982) also asked college students to rate the degree to which a rape survivor had “provoked” her attack. The victim was seen as significantly more
"provocative" when she was "drinking in a bar alone" than when she was "studying in the library alone". This is consistent with the notion that setting, (e.g., home alone versus in a bar), occasion (wedding versus cocktail party), and who the drinker is with (male versus female) may all exert an effect on perception of sexual intent and consent (Roehrich & Kinder, 1991).

**College Studies**

In a more recent study, Rauch & Bryant (2000) studied the relationship between gender effects and alcohol expectancies among college students. Participants were freshmen at a university in the southeastern United States. There were a total of 1,264 participants, 771 of whom were female. Each participant was interviewed separately, during which a personal drinking history was obtained to determine his/her drinking level. Each participant also completed the Alcohol Expectancy Questionnaire (AEQ). It was hypothesized that women expect more sexual enhancement from alcohol than men, while men expect more tension reduction from alcohol than women. Results showed no significant difference for women and men in expectancies of sexual enhancement when levels of drinking in terms of quantity were controlled. This contradicts the earlier findings that men tend to report greater sexual enhancement than women. This may reflect generational changes in gender differences, possibly due to shifts in the underlying socialization of men and women. The results of Rauch & Bryant (2000) indicated that men scored significantly higher than women did on the TR subscale of the AEQ when levels of drinking in terms of frequency were controlled. However, while studying expectancies and alcohol consumption
among women who had experienced sexual assault, Corbin, Bernat, McNair & Calhoun (1996) found that women who experienced rape or attempted rape had greater expectations of tension reduction (Marx et al., 2000). This is consistent with the findings of Meuhlenhard & Linton (1987), who found that women who have experienced rape engage in higher levels of alcohol consumption during dates than women who haven’t been raped. These women presumably drink alcohol to reduce anxiety or tension, as well as to increase sociability and positive beliefs about themselves.

In a similar study, Norris & Cubbins (1992) investigated the effects of alcohol consumption by a victim and an assailant on participants' perception of victim’s and assailant’s traits and behavior. Participants included 68 female and 64 male college students. Participants were first given a survey to assess their attitudes toward sex, dating, and rape, after which they were given a brief story depicting an acquaintance rape situation. The alcohol consumption in the story was manipulated, with only the assailant drinking, only the victim drinking, or both characters drinking. Participants then completed a survey with several items judging the behavior and traits of both the victim and assailant. Responses to the survey show that when both the victim and assailant had been drinking, the belief that a rape had occurred decreased. When both characters had been drinking, the likeability and sexual appeal of the assailant increased, compared to when only the victim had been drinking. Results showed that if only the victim had been drinking, the man is viewed as taking advantage of the woman, while if only the man had been drinking, more blame was placed on the woman.
Stormo, Lang, & Stritzke (1997) also studied college students' perceptions of an acquaintance rape scenario. They looked for the effects of gender and alcohol levels on respondents' attributions of responsibilities and blame. Participants included 742 undergraduates from Florida State University, 384 of whom were men. Participants were given a single version of the rape scenario as well as a corresponding questionnaire. Researchers manipulated alcohol intoxication levels depicted in the scenario. It was hypothesized that in conditions where both the victim and the perpetrator were depicted as being equally intoxicated, the victim would be blamed more than the perpetrator. It was also hypothesized that in scenarios where the victim was more intoxicated than the assailant, more blame would be placed on the perpetrator. They found that when both the victim and perpetrator were depicted as being equally intoxicated, the perpetrator was viewed as less blame worthy, while the victim was viewed as more responsible. However when the victim was more intoxicated and impaired than her assailant, the assailant was viewed as more blame worthy (Stormo, et al., 1997). It was also found that women place more blame on the victim than men.

In a similar study, Richardson & Campbell (1982) also found that less blame was placed on the offender when he was drunk as opposed to when he was sober. Interestingly, the level of drunkenness had the opposite effect for the victim; when drunk, more responsibility and blame was placed on her than when she was sober.

Similar findings were reported by George, Gournie and McAfee (1988) while studying perception of male and female drinking among college students.
In their study students were presented with a scenario in which a male and a female were socializing. The scenarios differed with respect to type of drink (alcohol versus cola) being consumed, as well as whether one or both genders were consuming alcohol. Results indicated that an alcohol-consuming female in the company of a male drinker was perceived to be more sexually disinhibited, more sexually available, and more likely to enjoy being seduced than a cola-drinking counterpart (George, Gournie and McAfree, 1988; as cited in Harrington & Leitenberg, 1994). It was also found that male and female drinking was viewed as most appropriate by both male and female college students when both male and female were drinking together. Lastly, the findings did not support the hypothesis that individuals who scored high in rape myth acceptance would perceive alcohol to be a strong sexual cue.

The results from George et al.'s study (as cited in Harrington and Leitenberg, 1994) also indicated that male targets were rated as being more sexually attracted to their partner than were the female targets by both the male and female groups. It was also found that both male and female groups perceived male targets as more likeable than the female targets; this supports Norris and Cubbins' (1992) findings that the behavior of the male assailant is seen as more likeable when he is drinking. These studies support the notion that male social drinking is viewed as more socially appropriate and acceptable than female drinking.

In another study, Goodchilds & Zellman (as cited in Abbey, 1991) found that men were more likely than women to assume that a woman who drank
alcohol with her date was interested in having sex with him; about 40% of these men thought it was acceptable to force sex on a drunken date. Three quarters of the acknowledged date rapists interviewed in another study said that they sometimes got women drunk in order to increase the likelihood of having sex with them (Kanin, 1985). When interviewed, many men who have raped indicated that women are “seductresses” who lure men into sexual situations and are therefore “responsible” for being raped (Harrington and Leitenberg, 1994). Norris & Cubbins (1992) suggested that these findings might explain why men are more likely to initiate sexual activity with women who are drinking.

Similarly, Abbey and Harnish (1995) investigated the effects of gender and alcohol consumption on college students’ perceptions of sexual intent of a young woman and man socializing. They also looked at the effects of participants’ rape supportive attitudes. Males and females were separated into two groups and given tests to assess their rape supportive beliefs and rape myth acceptance. Female and male college students read a story about a young couple socializing and consuming either nonalcoholic or alcoholic beverages. Participants were asked to rate each target on 30 different traits. The traits that measured the target’s sexuality were: flirtatious, seductive, promiscuous, sexy, attractive, suave, and romantic. The participants were also asked to respond to items that reflected the target’s likeability, as well as to questions assessing the extent to which one target was sexually attracted to the other target (e.g., receptive to a sexual come-on, sexually attracted, interested in having sex, desiring to be
seduced). Participants' perception of the appropriateness of each target's drinking alcohol in that social setting was also assessed.

It was hypothesized that women would be perceived as behaving more sexually than males when consuming alcohol, by both males and those who had rape supportive attitudes. Results showed that compared to women, men perceived those females who were consuming alcohol as behaving more sexually, especially men who scored high in rape myth acceptance. This is inconsistent with the earlier findings of George, et al. (1988) who found no difference between those with low and high rape myth acceptance in perceptions of female drinkers.

Using a similar design for their study, Bernat, et al. (1998) proposed that males' and females' alcohol consumption might lessen perceived responsibility for date rape, and serve as a "disinhibiting" cue for men to be sexually aggressive. They studied how sexually aggressive and non-aggressive college men judge sexual advances in an audio-tape date rape analogue. Participants included 102 males who were recruited from a large southeastern university. Participants were given two self-report measures, the Sexual Experience Survey (SES) and the Aggressive Sexual Behavior Inventory (ASBI), to assess sexually aggressive behavior. Based on the responses on the SES and the ASBI, participants were categorized as sexually aggressive or sexually non-aggressive.

Both groups listened to an audiotape, which depicted a man and a woman engaging in sexual activity. The scenario portrayed conversation and sexual behavior leading to sexual intercourse. As the verbal and physical force of the male escalated, the woman's refusal also escalated. Depending on which
condition each group was assigned, participants were either instructed that the characters were or weren’t under the influence of alcohol. Participants were instructed to stop the audiotape when they believed that the sexual advances should be terminated. After listening to the tape, participants completed a post experimental questionnaire to assess their ratings of the women’s communication during the sexual incident.

Several hypotheses were proposed. The results supported the first hypothesis, that sexually aggressive men would take significantly longer to stop the tape than sexually non-aggressive men. The second hypothesis was that both groups who were presented with the alcohol condition would take longer to stop the audiotape than groups presented with the nonalcoholic condition. Results indicated that when presented with the alcohol condition a significant delay in stopping the tape was only observed among the sexually aggressive men. These findings suggest that the presence of alcohol had no effect on sexually non-aggressive men’s judgment to stop the audiotape. It was also hypothesized that responses on the post experimental questionnaire would indicate that sexually aggressive men rated the victim as being less communicative in her requests to stop sexual advances. As predicted, these men rated the female character as being unclear about her wanting to stop the sexual advances, as well being dishonest about her desire to have sex. These findings are consistent with previous research, which has found college students to place more blame on the female (Schneider et al., 1994).

Violence and Alcohol
The dangerous effects of alcohol go beyond sexual assault. In some cases campus alcohol use has led to death. Along with sexual assault, alcohol-related problems that have been reported on campuses include vandalism, fighting, fatal and nonfatal injuries, accidents, sexually transmitted diseases, and unplanned pregnancies (Abbey, 1991). The presence of alcohol in violent incidents is common, and research has identified various patterns in the association of drinking and violence (Collins & Messerschmidt, 1993). Alcohol has been linked to homicides, robberies, domestic violence, suicide, and rape. Findings suggest that the relationship between alcohol and violence is due to (1) alcohol related cognitive impairment, (2) alcohol outcome expectancies that alcohol increases tendency toward aggression, and (3) beliefs that people, particularly males, are not accountable for their behavior after drinking (Collins & Messerschmidt, 1993).

As the tragedies become public knowledge, parents are becoming more selective, often choosing schools for their children based on campus alcohol consumption reputation (McGinn, 2000). Even those parents who trust their children to abstain from alcohol use, or to drink and behave responsibly, realize that sober and responsible students can suffer from the assaults, sex crime, and other tragedies that go along with other students’ heavy drinking. Finding out how much drinking goes on at a school is essential to determining the level of risk of crimes, in particular sexual assault. The present study investigates the prevalence of alcohol consumption and its relationship to sexual assault, on three college campuses.
In light of earlier research, it was hypothesized that the prevalence of different types of sexual assault on college campuses is linked to alcohol use. The present study examined the rate of sexual assault incidents and accessibility of alcohol on college campuses. Of the campuses selected, two were small liberal arts colleges and the other was a larger public university. The school samples varied in terms of alcohol policies (ranging from student enforced policies permitting drinking among students 21 and older, which will be referred to as "liberal", to an alcohol-free campus policy, which will be referred to as "conservative"). Three hypotheses were proposed: (1) campuses with a liberal alcohol policy were expected to have a higher rate of sexual assault than campuses with a conservative alcohol policy, (2) drinkers, as opposed to non-drinkers, were expected to have experienced more sexual assault incidents (3) freshmen, as compared to upperclassman, were expected to report having experienced a higher number of sexual assault incidents.

Methods

Participants

The participants in this study were students from three undergraduate campuses in Pennsylvania. Two of the schools were small liberal arts colleges with a mean enrollment of 1,400 students and the other was a larger public university with a mean enrollment of 3,700 students. The school samples also varied in terms of alcohol policies: a small liberal arts college with a liberal alcohol policy, a small liberal arts college with a conservative alcohol policy, and a medium sized public university with conservative alcohol policy. Students
from the small liberal arts college with a liberal alcohol policy were taken from an introductory level psychology course and were given extra credit as an incentive to complete the survey. Students from the small liberal arts college with a conservative alcohol policy and the medium sized public university with a conservative alcohol policy were asked to complete the survey in a nonsystematic manner while entering the dining room. There were a total of 177 participants, 105 of whom were female. In the sample from the small liberal arts college with a liberal alcohol policy 6% of the students were 21 and older, and 94% were under 21. In the sample from the small liberal arts college with a conservative alcohol policy, 49% were 21 and older, and 51% were under 21. In the sample from the medium sized public university with a conservative alcohol policy, 41% were 21 and older, and 59% were under 21.

Apparatus

Participants were given a 10-item survey (Appendix A and B), which included demographic questions, questions to assess experiences of sexual assault incidents in the past 30 days (i.e., sexual remarks, requests for unwanted sexual contact, unwanted nonsexual contact, casual and intrusive sexual contact, and unwanted sexual intercourse), and questions to assess witnessing of sexual incidents. On these individual sexual assault items, 1 = no, 2 = yes. Those students who responded, “yes” to experiencing or witnessing a sexual assault incident were then asked to indicate whether or not alcohol played a role in the incident.
Procedure

Those students who responded as never having used alcohol or not having consumed alcohol in the past 30 days were considered to be nondrinkers, while those students who responded as having used alcohol in the past 30 days were considered to be drinkers.

Results

Items assessing experiences with sexual assault incidents were totaled, to create a composite variable, total personal experience of sexual assaults. Similarly, items assessing witnessing of sexual assault incidents were totaled, yielding a second composite variable, total witnessing of sexual assaults. Total sexual assault experience scores ranged from 6 to 12, with high scores indicating high experience with these incidents. Total sexual assault witnessing scores ranged from 6 to 12 as well.

A one-way ANOVA was used to compare the three campuses on the two summary measures of personal experience with sexual assault: incidents of sexual assaults and witnessing of sexual assault incidents. No significant differences were found in personal experience of sexual assault (Small liberal arts college with liberal alcohol policy: M = 6.72, SD = 1.14, N = 77 versus Small liberal arts college with conservative alcohol policy: M = 7.04, SD = 1.36, N = 50 versus Medium sized public university with conservative alcohol policy: 6.84, SD = 1.38, N = 51; p = .40, F = (2,176) = .92, p > .05) or in witnessing of sexual assault incidents (Small liberal arts college with liberal alcohol policy: M = 7.1579, SD = 1.41, N = 76 versus Small liberal arts college with conservative alcohol policy: 6.84, SD = 1.38, N = 51; p = .40, F = (2,176) = .92, p > .05).
M = 7.1569, SD = 1.67, N = 50 versus Medium sized public university with conservative alcohol policy: M = 7.1573, SD = 1.58, N = 51; F (2/175) = .00, p > .05). A between subjects t-test showed no significant sex difference in reporting experience or witnessing of sexual assault (female: M = 6.83, SD = .129, N = 126 versus male: M = 6.87, SD 1.26, N = 74).

Between-groups t-tests were used to compare the responses of participants who had consumed alcohol in the past 30 days with those who had not. A significant difference was found in experience of unwanted nonsexual contact (drinkers: M = 1.19, SD = .40, N = 130 versus nondrinkers: M = 1.06, SD = .24, N = 49; t = 2.17, df = 177, p< .03). Significant differences were also found in experience of sexual remarks (drinkers: M = 1.6, SD = .49, N = 130 versus nondrinkers: M = 1.16, SD = .37, N = 49; t = 2.78, df = 177, p< .01), experience of requests for sexual contact (drinkers: M = 1.20, SD = .40, N = 130 versus nondrinkers: M = 1.08, SD = .28, N = 49; t = 2.99, df = 177, p< .01), and experience of unwanted casual sexual contact (drinkers: M = 1.2, SD = .40, N = 130 versus nondrinkers: M = 1.08, SD = .28, N = 49; t = 1.89, df = 177, p< .06). No significant differences were found in experience of unwanted intrusive sexual contact (drinkers: M = 1.15, SD = .40, N = 130 versus nondrinker: M = 1.0, SD = 0, N = 49; t = 1.40, df = 177, n.s.), or in experience of unwanted intercourse (drinkers: M = 1.03, SD = .20, n = 130 versus nondrinkers: M = 1.02, SD = .142, N =49; t = .596, df = 177, n.s).

When considering the witnessed sexual assault incidences, significant differences between drinkers and nondrinkers were only found in terms of sexual
remarks (drinkers: \( M = 1.49, \ S D = .50, \ N = 130 \) versus nondrinkers: \( M = 1.30, \ S D = .47, \ N = 49; \ t = 2.16, \ df = 177, \ p < .05 \)).

No significant difference in reports of unwanted intercourse was found between freshmen and upperclassmen.

When looking at the prevalence of drinking, the small liberal arts college with a conservative alcohol policy reported the highest use of alcohol (92% were drinkers), followed closely by the small liberal arts college with a liberal alcohol policy (70%). In the medium sized public university with a conservative alcohol policy, 57% of the sampled population drank alcohol, while 43% did not.

Among those who reported experiencing inappropriate nonsexual contact, 65% believed that alcohol use was involved in the incident. Among the participants reporting personal experience of unwanted sexual remarks, 61% believed alcohol as having played a role in the incident. For those who experienced requests for sexual contact, 62% attributed the incident at least in part to alcohol. Among those witnessing inappropriate sexual remarks, again the majority (72%) reported that alcohol was involved.

Discussion

The purpose of the present study was to investigate the link between sexual assault on college campuses and the prevalence of alcohol. It was expected that the campus with the most liberal alcohol policy would have a higher rate of sexual assault, and that the conservative campuses would have a lower rate. However, no difference across the groups was found in students' experiencing and/or witnessing such assaults. This may have been an artifact of
methodological variability in survey administration since it was necessary to use different methods to administer the questionnaires on the campuses. It is possible that this confound obscured real differences across schools. Further research, using identical modes of survey administration across the campuses would help address this problem. It is also possible that campus policies have little to do with actual student alcohol use. Consequently, no differences across campuses should be expected. In order to evaluate this possibility that official policy is a poor marker for actual student behavior, differential alcohol use across campuses was investigated.

Due to their alcohol policies, it was expected that the conservative campuses (the medium sized public university and the small liberal arts college) would have lower rates of alcohol consumption; however this hypothesis was only partially supported. While the small liberal arts college with a conservative alcohol policy had a more moderate amount of alcohol use, results indicated that the medium sized public university with a conservative alcohol policy actually had the highest rate of alcohol use, followed closely by the small liberal arts college with a liberal alcohol policy. These findings may be due to the ineffectuality of school policies, or possibly be attributed to the age confound in this sample. Almost half of those students from the medium sized public university with a conservative alcohol policy were over the age of 21. Interestingly, although the majority of the students from the small liberal arts college with a liberal alcohol policy were under the age of 21 (94%), their rate of alcohol use was still quite high (70%). Similarly, on the other two campuses the
number of students reporting alcohol use exceeded the number of students that were above the age of 21, which means that underage drinking is highly prevalent on all three of the sampled campuses.

Our findings indicate that most victims who were sexually assaulted on college campuses believe that the incident involved alcohol. Victims and/or perpetrators that were involved in a sexual assault tend to have been intoxicated. This is consistent with the results from previously mentioned studies (Koss, et al. 1987). Our findings demonstrate that drinkers, as compared to nondrinkers, experience more incidents of nonsexual contact, sexual remarks, requests for sexual contact, and unwanted casual sexual contact. As for those students who witnessed other students' receiving sexual remarks, the majority believed that alcohol played a role in the incident.

It was hypothesized that freshmen, as compared to upperclassmen, were expected to report greater experience of unwanted intercourse. Contrary to the earlier findings of Bohmar & Parrot (1993), our data showed no significant differences between freshmen and upperclassmen in experience of unwanted sexual intercourse. However, a trend in the data suggested that upperclassmen had a higher report of experience of unwanted sexual intercourse. This may be due to differential amount of time spent on campus (e.g., freshmen may go home more on weekends) and the ability to drink alcohol because of age barriers and differential access. Finley and Corty (1993) found that by the time students were in their junior and senior years in college, about a third of the women reported
having been victims, and about a third of the men reported having been
perpetrators of sexual assault. They also found that upper level female students
experienced higher incidents of nonconsensual penetration (one in three),
compared to one in five of the first-year students who experienced such an
incident. Although these findings support the trend found in our data, our
findings were not significant. More extensive research should be conducted on
the rates of unwanted sexual intercourse between freshmen and upperclassmen to
determine if a significant different exists today, and if so, in what direction.

Previous findings that have linked alcohol use to sexual assaults (Benson,
Charlton, & Good hart, 1992; Muehlenhard & Linton, 1987; Harrington &
Leitenberg, 1994; Abbey, 1991) were supported by our results. The majority of
students who experienced a sexual assault incident believed that alcohol played a
role in the incident, and drinkers reported greater experience of various types of
unwanted incidents than non-drinkers.

A recently published article in Newsweek, which focused on binge
drinking on college campuses, discussed the hazards of students irresponsibly
drinking alcohol and gave parents and prospective students advice on
investigating alcohol use on campus when selecting a school. Information
provided by schools and outside sources may not be the most reliable for
revealing drinking habits of students. It was suggested in the article that students
and parents openly ask questions about the alcohol availability on campus. The
authors recommend that parents ask "admissions officials about alcohol policies,
such as whether they notify parents of students caught with alcohol" (McGinn,
If the parent or prospective student is interested in a campus with little or no alcohol, McGinn argues that it is probably safer to apply to a school with a “dry” or conservative alcohol policy. The results of the present investigation contest the value of such a plan, since drinking rates were high on small campuses.

McGinn urges parents to realize that schools that permit drinking only among students over the age of 21 pose a greater risk of underage drinking, unless schools enforce campus policies. Students under the age of 21 can readily get alcohol from students over the age of 21. At schools where partying is emphasized, alcohol is freely available at the parties. Even in schools where there are persons at the party responsible for keeping an eye on partygoers, rarely are students being questioned about their age before alcohol is distributed. Some campuses choose to turn a blind eye and address the issue only if the student has been involved in an incident where a campus policy has been broken, but by then, someone may have been seriously hurt. Among first year students, drinking is often viewed as “part of the college experience”, and even encouraged. In addition, it has been suggested that parents and prospective students interested in campus drinking do the following: check out campus fraternity systems (which traditionally harbor more excessive drinking), check out the location (schools in rural areas tend to have heavier drinking on campus for lack of off campus activities), go on campus tours on weekend nights, and find out what steps the school has taken to cut back on campus or even underage binge drinking (McGinn, 2000).
Some schools have taken steps and even become involved in national programs, which fight binge drinking among students. These steps include: changing class schedules (it is suspected that too few classes on Fridays are sparking Thursday night drinking), changing social norms (so that heavy drinking is less socially acceptable), banning alcohol from campus parties, and toughening penalties for students caught drinking (McGinn, 2000).

Some schools group students according to class to make alcohol free dorms and/or organize awareness programs designed to teach students about the risk of excessive drinking. These programs should also teach students about the dangers associated with drinking, such as sexual assault. These should include information about rape myths, acquaintance rape, and what to do in cases of an assault. Some type of counseling or support group should be available to any student that has experienced sexual assault. Survivors of rape and/or sexual assault often experience Rape Trauma Syndrome (RTS), which is a form of Post Traumatic Stress Disorder (PTSD) (Donaldson, 1990). The effects from RTS can severely affect one’s life and can last for years. If unavailable on campus, schools may want to refer victims to a local rape crisis center or someone knowledgeable in the area. It was noted in the Kalof (1993) study that at the time of their study, Greek societies had minimal involvement with sexual coercion awareness/prevention programs. Research has shown that programs aimed at enhancing awareness of sexual assault issues have reduced sexual assault incidents on campus. It is through these tactics that schools can be more
successful attracting students and parents interested in an alcohol and violence free atmosphere.
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Appendix A: Survey

1. What sex are you?  A. Female  B. Male
2. What age are you?  A. 18 or younger  B. 19  C. 20  D. 21 or older
3. What class year are you?  A. Freshman  B. Sophomore  C. Junior  D. Senior
4. Indicate your ethnicity: ___________________________
5. Are you a member of a Fraternity or Sorority?  A. Yes  B. No
6. Indicate your usage of the following substances:
   A. Cigarettes  A. never used  B. Used, but not in past 30 days  C. Used in past 30 days
   B. Alcohol  A. never used  B. Used, but not in past 30 days  C. Used in past 30 days
   C. Marijuana  A. never used  B. Used, but not in past 30 days  C. Used in past 30 days
   D. Cocaine  A. never used  B. Used, but not in past 30 days  C. Used in past 30 days
7. Have you ever reported an incident of sexual harassment on your campus?  A. Yes  B. No
8. Do you know how to report such an incident on your campus?  A. Yes  B. No
9. Indicate whether you have witnessed any of the following incidences within the past 30 days on campus:
   A. Inappropriate sexual remarks made towards another student  A. Yes  B. No
   B. Persistent request for unwanted sexual contact  A. Yes  B. No
   C. Nonsexual contact, which has made someone uncomfortable  A. Yes  B. No
   D. Unwanted casual sexual contact  A. Yes  B. No
   E. Intrusive sexual contact (coerced or forced) such as kissing and/or grooping  A. Yes  B. No
   F. Unwanted sexual intercourse  A. Yes  B. No
10. Have you personally experienced any of the following incidences within the past 30 days on campus?
    A. Inappropriate sexual remarks  A. Yes  B. No
    B. Persistent request for unwanted sexual contact  A. Yes  B. No
    C. Nonsexual contact, which has made you uncomfortable  A. Yes  B. No
    D. Unwanted casual sexual contact  A. Yes  B. No
    E. Intrusive sexual contact (coerced or forced) such as kissing and/or grooping  A. Yes  B. No
    F. Unwanted sexual intercourse  A. Yes  B. No
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