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Explicating Alcohol's Role in Acquaintance Sexual Assault: Complementary Perspectives and Convergent Findings

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Abstract

This article summarizes the proceedings of a symposium presented at the 2004 meeting of the Research Society on Alcoholism (RSA) in Vancouver, British Columbia, Canada. There were four presentations and a discussant. The symposium was co-chaired by Tina Zawacki and Jeanette Norris. The first presentation was made by Jeanette Norris, who found that alcohol consumption and preexisting alcohol expectancies affected women's hypothetical responses to a vignette depicting acquaintance sexual aggression. The second presentation was made by Joel Martell, who reported that alcohol-induced impairment of executive cognitive functioning mediated the effect of intoxication on men's perceptions of a sexual assault vignette. In the third presentation, Antonia Abbey found that the experiences of women whose sexual assault involved intoxication or force were more negative than were the experiences of women whose sexual assault involved verbal coercion. The fourth presentation was made by Tina Zawacki, who reported that men who perpetrated sexual assault only in adolescence differed from men who continued perpetration into adulthood in terms of their drinking patterns and attitudes toward women. William H. George discussed these findings in terms of their implications for theory development and prevention programming.

Keywords

Alcohol Consumption; Sexual Assault; Prevention

INTRODUCTION

Tina Zawacki and Jeanette Norris

Sexual assault frequently involves a man and woman who have been drinking alcohol and have been interacting socially. Delineating how alcohol facilitates sexual assault among acquaintances requires the integration of multiple methods, mechanisms, and participant

perspectives. Using both survey and experimental methods, the research reported in this summary addresses psychological and pharmacological mechanisms linking sexual assault and alcohol consumption by perpetrators and victims. This summary brings together four studies that examined the distal and proximal roles of alcohol in sexual assault from the perspectives of both men and women. The first two research teams report on laboratory experiments that demonstrated that acute intoxication causally affects men's and women's in-the-moment reactions to hypothetical, sexually aggressive encounters. The final two research teams present survey data elucidating the role that alcohol plays in the real-life perceptions and behaviors of sexual assault victims and perpetrators. These complementary approaches present convergent results that allow a fuller understanding of the underlying dynamics of alcohol-involved sexual assault.

ROLE OF ALCOHOL EXPECTANCIES AND DOSAGE LEVEL ON WOMEN'S RESPONSES TO ACQUAINTANCE SEXUAL AGGRESSION

Jeanette Norris, Susan A. Stoner, William H. George, N. Tatiana Masters, Tina Zawacki, and Kelly C. Davis

Several studies have found that, in a majority of sexual assaults, either or both the assailant and the victim have been drinking together in a social situation (for reviews, see Abbey et al., 2004; Ullman, 1997). Although clear, assertive resistance is usually the most effective way to avoid being raped, women who are sexually assaulted by an acquaintance are often reluctant to resort to physical resistance, at least initially (Ullman and Knight, 1993). Unlike a stranger sexual assault in which danger cues are often apparent immediately, a sexual assault by an acquaintance can require the victim to engage in a great deal more information processing with regard to environmental cues, such as interpreting the man's motivations, as well as weighing the implications and repercussions of one's own responses. Thus, to understand women's resistance to acquaintance sexual assault, it is important to take into account women's cognitions in addition to their actual behavior (Norris et al., 1996). Because alcohol disrupts one's ability to process information (for a review, see Steele and Josephs, 1990), this study examined its effects on cognitions related to acquaintance sexual assault, as well as resistance responses. Because individuals' beliefs or expectancies about alcohol's effects can influence their behavior when drinking, this study also examined women's expectancies about alcohol-related sexual vulnerability (Abbey et al., 1999). This study used an experimental design to examine the relationships among preexisting alcohol expectancies and in situ alcohol consumption on women's cognitions and hypothetical resistance responses in a simulated forced sexual encounter with a man. It was expected that preexisting expectancies would interact with alcohol consumption to predict both cognitions and resistance responses directly. It was also hypothesized that cognitions would predict resistance responses.

A total of 216 women who were 21 to 35 years of age (mean = 24.6; SD = 3.7) participated. Very heavy drinkers (>35 drinks a week), abstainers (<1 drink per week), and others for whom alcohol consumption would be contraindicated were excluded, as were women who were currently involved in a steady relationship with a man. Participants were paid 10/hr for one laboratory session. After providing informed consent, participants completed a

demographics questionnaire and an alcohol expectancy measure (Abbey et al., 1999) via computer. They then were randomly assigned to one of three beverage conditions: control [0.0 blood alcohol level (BAL)], low dose (0.04 BAL), or high dose (0.08 BAL), using a yoked control procedure (Giancola and Zeichner, 1997). After the beverage administration protocol, participants read a story that depicted an encounter between a man and a woman. The participant was asked to project herself into the story as if it were really happening to her, and the story was written in the second person to enhance this perspective. Over the course of the interaction, the man became increasingly forceful about wanting sex. The story ended as the man made clear his intention to rape the woman; however, no rape was depicted. Participants completed 13 items that assessed cognitions that they might have in the situation, including uncertainty about what was happening, concern about being nice to the man, shock, and feeling powerless. Thirteen items assessed three types of resistance responses: assertive, polite, and passive. All items were measured using seven-point Likert scales.

Path analyses using multiple regression were conducted to test the predictions that alcohol would have a deleterious effect on resistance that would be at least partially mediated through cognitions and moderated by expectancies. Models were evaluated separately for each cognition type and each resistance type. The prototypical model is shown in Fig. 1.

Analyses revealed that there were no interactive effects of alcohol consumption and expectancies for direct or polite resistance. For passive resistance, two general patterns of findings emerged. In every model, cognition predicted passive resistance: the more a woman expressed concerns of being nice, uncertainty, shock, or powerlessness, the more likely she was to endorse passive resistance.

In addition, there were main effects of expectancies for the cognitions of being nice, uncertainty, and shock. The more that women expected alcohol to make them sexually vulnerable, the more that they endorsed these cognitions. Expectancies also moderated alcohol's effect on passive resistance. As dosage increased, expectancies became more influential. There was also a main effect of alcohol consumption on uncertainty; as intoxication increased, so did uncertainty.

A second pattern of findings emerged for powerlessness. There were main effects of expectancies on powerlessness and passive resistance. The more that women expected alcohol to make them sexually vulnerable, the more powerlessness and passivity they endorsed. Expectancies also moderated alcohol's effect on powerlessness. As dosage increased, expectancies exacerbated feelings of powerlessness. However, unlike for the other cognitions, expectancies did not moderate alcohol's effect on passive resistance.

In trying to understand what determines alcohol's effects on women's resistance to an acquaintance sexual assault, it is important to take into account the cognitions that she is having at the time. It seems that these cognitions might be affected by both her alcohol consumption at the time of the assault and her expectancies or beliefs about how alcohol will affect her. To understand fully the interactive relationship between alcohol and expectancies, however, it is important to focus on expectancies that are related directly to the cognitions

being studied. So, for instance, if this study had measured expectancies concerned with uncertainty about the situation, then perhaps there would have been an interaction between it and alcohol consumption. Thus, there might be domains of cognitions that are affected directly by alcohol, such as uncertainty, that should be examined in more depth in the future. An especially interesting aspect of the interaction between expectancies and alcohol consumption was that it was not an all-or-none relationship. The expectancy effect was enhanced as dose increased. To our knowledge, this type of interactive effect has not previously been demonstrated. These findings may provide some insight into the psychological processes underlying how women deal with an unfolding sexual assault. Even a slight increase in a woman's belief that she is powerless to protect herself when being sexually assaulted and a commensurate increase in passivity could be enough to effect the completion of a rape. Thus, it is important for sexual assault prevention programs to address the relationship between women's cognitions and resistance responses. This is not to say that the complete onus for avoiding sexual assault should be placed on women. Rather, this information can be used to empower women to have more control in these types of situations.

ALCOHOL AND EXECUTIVE COGNITIVE FUNCTIONING: INFLUENCES ON MEN'S PERCEPTIONS OF UNWANTED SEXUAL ADVANCES

Joel Martell, Tina Zawacki, Jeanette Norris, and William H. George

Alcohol is one of the strongest predictors of rape (Koss and Dinero, 1989). National Crime Victim Survey data indicate that alcohol had been consumed by the perpetrator in 46.2% of all rape cases (Brecklin and Ullman, 2001). Despite abundant correlational evidence associating alcohol and sexual assault, the causal mechanism underlying this link has yet to be determined.

Physiologically, alcohol is thought to influence behavior by disrupting cognitive function (Steele and Josephs, 1990; Taylor and Leonard, 1983). Steele and Josephs (1990) coined the term "alcohol myopia" to describe alcohol-induced cognitive impairment. According to this theory, there are two main types of cues: impelling cues and inhibitory cues. Impelling cues signal the instigation of an action and are thought to require relatively little cognitive processing. Opposing this type of cue are inhibitory cues, which signal a person to refrain from or resist engaging in an action. Inhibitory cues are thought to require relatively more cognitive processing. In situations in which both types of cues are strong, a sober person retains the ability to attend to both types of cues and to weigh the consequences of each in deciding whether to take action. In contrast, an intoxicated person loses the capacity to perform such reflections and becomes increasingly limited to perceiving only the impelling cues in a given situation. By limiting the drinker's ability to attend to inhibitory cues, the drinker becomes more likely to exhibit impulse-driven behavior (Steele and Josephs, 1990). Researchers have invoked alcohol myopia to explain experimental findings related to sexual assault (Norris and Kerr, 1993). However, the specific mechanism underlying alcohol's effects has not been fully delineated (Sayette et al., 1993).

One possible set of mechanisms that has been focused on by researchers who are interested in the link between alcohol and nonsexual human physical aggression is executive cognitive functioning (ECF) (Giancola, 1995; Seto and Barbaree, 1995). ECF includes “higher order” mental abilities, such as attention, planning, abstract reasoning, and self-regulation. Research indicates that alcohol intoxication disrupts ECF (Hoaken et al., 1998). Aggression research is pertinent to sexual aggression in that the inhibition of the aggressive responses under certain conditions, such as when a person feels provoked, may be similar to that required to inhibit sexually aggressive responses (Seto and Barbaree, 1995).

The purpose of the current study was to investigate ECF as a possible mechanism underlying the alcohol myopia effect with regard to perceptions of unwanted sexual advances. Hypotheses included that intoxicated men would overattend to impelling cues and would tend to underattend to inhibitory cues relative to their sober counterparts. Differences between intoxicated and sober participants were expected to be most evident in the presence of strong impelling and inhibitory cues. Impaired ECF was expected to mediate the effect of alcohol on men’s responses to the sexual assault scenario.

Participants were 128 adult male social drinkers who were recruited through a campus newspaper at a large university in the Western United States and had a mean age of 23.0 years. At the laboratory, participants were randomly assigned to either the alcohol or the control condition. Each alcohol participant was given a dose of vodka that was mixed with orange juice and calculated to raise his BAL to 0.08%. When the beverage administration phase was completed, participants completed a brief battery of tests that are widely accepted as measures of key elements of ECF (Boone et al., 1998; Stern and Prohaska 1996). When these were completed, the participant was left in private to read the stimulus story and complete the dependent measures on a computer.

The stimulus story was presented in the second person (e.g., “You are walking with a friend ...”) to help the participant project himself into the situation. The instructions directed the participant to imagine himself in the story and that the events are happening to him at his current level of intoxication. The story began at a party and progressed in three segments. After each segment, the story stopped and the dependent variables were administered. In the first segment, the female story character emits only neutral (nonsexual) cues. In the second segment, she emits only consensual sexual cues and the couple engage in kissing and fondling (through clothing). In the third segment, the female character emits escalating resistance cues and makes it clear that she does not wish the sexual activities to progress further.

Factor analysis indicated that all four ECF measures loaded on a single factor; therefore, scores for these tests were converted to standardized scores and combined. Dependent variables fell into two domains: perceptions of the female character, including her sexual willingness and the sexual meaning of her behaviors, and perceptions of self as projected into the story, including the likelihood of engaging in depicted sexual advances and endorsements of justifications for unwanted sex and for the use of coercive strategies. Ratings were on Likert scales (0–6), and variables were tailored to specific situational cues.

Participants were also asked to rate the relative strength of the reasons for and against having sex with the female character at each administration of the dependent variables: “At this point in the story, which reasons would you say are stronger, the reasons FOR having sex with [her] or the reasons AGAINST having sex with her?” This variable was unique in that, rather than asking participants to assess the valence of a particular cue imbedded in the story, it required them to estimate the relative strength of impelling versus inhibitory cues up to that point in the story in a single variable. According to alcohol myopia theory, men who had drunk alcohol might be expected to attend more readily to cues that signal them to pursue further sexual contact, perhaps at the expense of cues to inhibit further escalation.

ANOVA indicated that, at time 3, in the presence of both impelling and inhibitory cues, men who had consumed alcohol rated the female story character as more willing to have sex and rated her behaviors as conveying more sexual intent than did sober men. Compared with sober men, intoxicated men also attributed more sexual meaning to her behavior at this time point; endorsed more coercive strategies to obtain sex; and indicated that if they were actually in a similar situation, then they would be significantly more likely to engage in the behaviors depicted in the story.

To test whether acute reductions in ECF might mediate men’s perceptions of cues related to the commission of sexual assault, we performed a series of multiple regressions using methods described by Baron and Kenny (1986) and Judd and Kenny (1981). The terminal dependent variable was reasons for and against sex, measured after the segment in which the female story character emitted clear resistance cues. The first regression indicated that intoxicated men reported perceiving the reasons for pursuit of sex with the female story character after her resistance were relatively more salient than was indicated by sober men. The second regression indicated that intoxicated participants retained less ECF function than sober participants. The third equation included both the composite ECF and beverage condition as predictors with reasons for and against sex as the dependent variable. Results indicated that those who retained more ECF rated the reasons for having sex with the female story character as significantly weaker than did participants who retained less ECF function. As predicted, the direct effect of alcohol on reasons for and against sex was rendered nonsignificant in the final equation, indicating complete mediation of the alcohol effect by ECF score.

In summary, the present study found that, in general, alcohol fostered responses that were conducive to sexual assault in a hypothetical situation. In particular, alcohol’s effect on sexual reasoning was shown to have been completely mediated by alcohol-induced impairment of ECF. In keeping with alcohol myopia theory, these effects took place only under conditions of high conflict between impelling and inhibitory cues. These findings provide support for alcohol myopia and ECF as mechanisms underlying alcohol’s involvement in sexual assault perpetration. Other alcohol effects were also congruent with alcohol myopia.

It is important to note that this was an analog study; sexual coercion was depicted in the vignette, but no actual physical coercion took place in the laboratory. These self-reported perceptions and judgments may not fully reflect actual behavior. Nonetheless, the findings

from this project map onto situations encountered in naturalistic settings. This research may assist in future efforts to understand the impact of alcohol intoxication in that it sheds light on how it might be possible for normal college men to perpetrate sexual assault. Intoxicated men are likely to perceive sexual situations differently from their sober counterparts. These differences are likely to be in the direction of sexual assault, and these differences may be mediated by disruption of ECF. This knowledge may serve to help focus sexual assault prevention efforts by increasing awareness of the specific mechanisms that are disrupted by alcohol.

IMPACT OF PERPETRATOR TACTICS ON SEXUAL ASSAULT VICTIMS' RESPONSES: A COMPARISON OF INTOXICATION, PHYSICAL FORCE, AND VERBAL COERCION

Antonia Abbey, Michele R. Parkhill, Renee BeShears, A. Monique Clinton-Sherrod, and Pam McAuslan

At least half of all sexual assaults involve alcohol consumption by the victim, perpetrator, or both (for a review, see Abbey et al., 2004). Despite the co-occurrence of drinking and sexual assault, surprisingly little is known about the role that alcohol plays within the assault and how sexual assaults that involve alcohol as a tactic differ from those that do not. Definitions of rape always include the use of physical force to obtain unwanted sexual intercourse (Bureau of Justice Statistics, 1995). The victim's inability to give consent is a common but not universal component of rape statutes (Gyls and McNamara, 1996). Intoxication caused by alcohol is the usual reason that adolescent and adult victims are unable to give consent, although illicit drugs and date rape drugs are also used (Stermac et al., 1998; Testa and Livingston, 1999). Definitions of rape do not typically include verbally coercive strategies, although these are frequently included as lesser sexual offenses in the criminal code.

Many of the studies that have examined alcohol's role in sexual assault focus solely on whether alcohol was consumed rather than on whether it was the primary tactic used by the perpetrator to obtain sex. Several authors have reported that alcohol-involved assaults are more likely to include time spent together in places such as parties or bars and not knowing each other well (Abbey et al., 1996; Norris et al., 1998). In a survey conducted with college rape victims, Tyler et al. (1998) found that the woman's usual alcohol consumption was the only significant predictor of intoxication being used as a tactic.

The present study compared the characteristics of sexual assaults that involved intoxication, physical force, and verbal coercion. The sample consisted of 139 women in the Detroit metropolitan area who had experienced a sexual assault since the age of 14. Participants ranged in age from 18 to 49 years with a mean age of 31 years ($SD = 9.40$). Fifty-two percent of the sample were black, and 48% were white.

Participants were recruited through random-digit dialing, and then in-person computer-assisted self-interviews were conducted. All interviewers were women, and participants and interviewers were matched on ethnicity. A modified version of Koss et al's (1987) measure of sexual assault was used with follow-up questions about one sexual assault experience. For

participants who had experienced more than one sexual assault, a computer algorithm was used to select one incident for which follow-up questions would be asked.

Participants were divided into three groups on the basis of the primary tactic that had been used by the perpetrator to obtain sex in the incident that they described in detail: intoxication ($n = 29$), physical force ($n = 33$), or verbal coercion ($n = 77$). When the tactic used was intoxication, both the victim and the perpetrator consumed more alcohol than when the tactic was physical force or verbal coercion. Surprisingly, the relationship between the victim and the offender, location of the interaction, and number of other people present were unrelated to perpetrator tactics.

There were several variables for which women in each of the three groups had significantly different scores. Women whose perpetrators used physical force were most likely to label what happened as rape, to hold the perpetrator most responsible for what happened, to experience the most negative affect, and to view what happened as most serious. Women whose perpetrators used verbal coercion had the lowest scores on these variables, and women whose perpetrators used intoxication had scores that fell in between those of the other two groups. Although women who experienced physically forced sex had the most negative responses, women in all three groups scored above the mid point of the scale on most of the measures, indicating that all types of sexual assault had negative consequences.

These findings underscore the need to examine further the role of alcohol in sexual assault. There may be a curvilinear relationship between perpetrators' aggressiveness and his alcohol consumption such that increased alcohol leads to greater aggressiveness until the level of impairment becomes so extreme that motor functioning begins to decline (Abbey et al., 2004). When the victim is extremely intoxicated, the perpetrator may not need to use much physical force because she is unable to effectively resist. In addition, many of these women had experienced multiple sexual assaults, and it is important to evaluate their cumulative impact on psychological and physical health.

ALCOHOL'S ROLE IN SEXUAL ASSAULT PERPETRATION ACROSS THE LIFESPAN: IMPLICATIONS FOR EARLY INTERVENTION

Tina Zawacki, Antonia Abbey, Philip O. Buck, and Pamela McAuslan

Past research has shown that most sexual assault perpetrators commit repeated assault. Nonetheless, little research has addressed what patterns of perpetration emerge over time and what personality traits, attitudes, and life experiences might predict different trajectories. Developmental models that address physical aggression and other antisocial behaviors suggest that different trajectories may exist. For example, Moffitt et al. (2002) distinguished between antisocial behavior that is limited to adolescence and antisocial behavior that persists across the lifespan. Lifecourse persistent offenders begin in childhood, continue through adolescence, and carry forward their antisocial behavior into adulthood. Moffitt et al. also described a pattern of antisocial behavior that is circumscribed to adolescence as a method of demonstrating independence during a "maturity gap" that exists during adolescence in Western culture. Abbey and McAuslan (2004) argued that this "maturity gap" extends into late adolescence in the realm of sexual experience for young

men. Sexual assault is a horrendous crime and should never be excused or minimized. Nonetheless, the repercussions caused by a young man who perpetrates sexual assault only during adolescence are likely much different than for a man who continues perpetration in adulthood. For example, repeat perpetrators are likely to harm greater numbers of victims.

The present study explored individual differences among sexual assault perpetrators who had committed assaults at different time frames of their lives. Specifically, we were interested in exploring differences among men who had never perpetrated sexual assault (nonperpetrators), men who had perpetrated sexual assault only at age 18 or younger (Early-only perpetrators), and men who had perpetrated sexual assault both before and after age 18 (repeat perpetrators).

Ample research has examined attitude and life experience differences between men who have and have not committed sexual assault, without delineating age of perpetration. On the basis of this research, it was hypothesized that compared with nonperpetrators, repeat perpetrators would hold more hostile attitudes toward women, have a stronger history of impersonal sexual experiences and misperception of women's sexual intent, and report more drinking in sexual situations. On the basis of developmental theories of antisocial behavior, we also predicted that early only perpetrators and repeat perpetrators would differ. We hypothesized that perpetration circumscribed to adolescence would be predicted primarily by situational factors that could be specific to the assault event reported and to the perpetrator's stage in life. Therefore, we expected that compared with both repeat perpetrators and nonperpetrators, early-only perpetrators would report greater drinking in sexual situations and misperception of women's sexual intent. Conversely, we expected that repeat perpetrators would be characterized by internal, stable attitudes and motivations that could drive perpetration past an early stage of life. Thus, we hypothesized that compared with early-perpetrators, repeat perpetrators would hold more hostile attitudes toward women. Because both early-only and repeat perpetrators were likely engaging in various forms of adolescent experimentation—including sexual behavior—we hypothesized that the two groups would be similar in terms of their impersonal sexual experiences.

Participants were 355 men who attended a large, urban, Midwestern university (mean age = 25). The sample was predominantly European-American (56%) and African-American (31%). Participants were paid 20 for completing a self-administered questionnaire. Sexual assault perpetration since age 14 was assessed using a 16-item modified version of the Sexual Experiences Survey (Koss et al., 1987). For each item, participants indicated their age at the time of the assault. Standard measures also were included of hostile attitudes toward women, misperception of women's sexual intent, general drinking and drinking in sexual situations, and impersonal sexual experiences.

Fifty-eight percent ($n = 204$) of the men self-reported that they had committed at least one sexual assault since age 14. On the basis of their age at the time of their sexual assaults, men were classified into one of three mutually exclusive groups: nonperpetrators ($n = 151$), early-only perpetrators ($n = 56$), or repeat perpetrators ($n = 48$). Because of the theoretical framework of the study, men who reported perpetrating only after age 19 were not included in the present analyses.

Hypothesized differences among the perpetration groups were examined through discriminant function analysis (DFA). As hypothesized, compared with nonperpetrators, men in both perpetration groups reported more hostile attitudes toward women, more impersonal sexual experiences, and more drinking in sexual situations. Also as hypothesized, early-only and repeat perpetrators were similar to each other in terms of their impersonal sexual experiences. Although we had predicted that compared with repeat perpetrators, early-only perpetrators would be more strongly characterized by situational factors such as misperception of sexual intent and drinking in sexual situations, we found a slightly different pattern of results. Repeat perpetrators reported more frequent misperception of women's sexual intent than did early-only perpetrators. This result may reflect a component of hostility toward women in misperception. Some misperceptions may occur when a man overlooks a woman's true level of sexual interest because he does not care about her intentions or does not trust that she is revealing her true feelings. Early-only and repeat perpetrators did not differ in terms of drinking in sexual situations. Repeat perpetrators, however, reported heavier general drinking than early-only perpetrators. This suggests that multiple trajectories of perpetration that involve different patterns of drinking may exist. Alcohol may play a more situationally specific role for early-only perpetrators, whereas for repeat perpetrators, drinking may play a more pervasive role in their lives. This could indicate greater comorbidity between sexual assault perpetration and heavy general drinking later in adulthood than in adolescence. Further analyses of the current data will shed light on these possibilities. Ultimately, longitudinal research that tracks men through adolescence into adulthood is needed to best tease out these patterns.

Overall, these results underscore that perpetration in adolescence seems to be a crucial intervention point for sexual assault prevention. The present findings suggest that hostile attitudes toward women are a central predictor of repeated perpetration. Many current prevention programs address hostility toward women, and these results provide empirical support for this approach. Alcohol consumption seems to play multiple and complex roles in perpetration across the lifespan and therefore needs to be assessed and addressed by prevention programs in terms of both general drinking behavior and drinking specifically in sexual situations.

DISCUSSION

William H. George

These projects form a rare assemblage: a set of alcohol and sexual assault studies that constitute a symmetrical balance of (female) victim and (male) perpetrator perspectives examined within both survey and experimental paradigms. These perspectives and paradigms complemented one another in revealing that multiple alcohol variables— self-reported consumption, alcohol expectancies, and acute intoxication—contributed to various aspects of acquaintance sexual assault. Despite inherent limitations such as reliance on retrospective self-report and correlational analyses, the survey projects enjoyed the high external validity of focusing on real-life transgressions and extended our knowledge about underinvestigated contours of alcohol-related sexual assaults. The Abbey et al. survey substantiated that intoxication itself can be used strategically by perpetrators as a tool of

assault, generating distinctive consequences for victims. The Zawacki et al. survey substantiated that unacknowledged perpetrators lurk among normative young adult populations and demonstrated that there are developmental trajectories for their perpetration that involve different patterns of alcohol consumption. The experiments, despite their reliance on laboratory approximations of and proxies for sexual victimization and aggressiveness, were advantageous in ascertaining intoxication levels, controlling the order of events, and thereby supporting causal analyses. The Norris et al. experiment showed (1) that acute intoxication causes women to respond cognitively and behaviorally to a potential assault in ways that increase the likelihood of being victimized and (2) that this effect is moderated by women's preexisting alcohol expectancies. The Martell et al. experiment showed not only that intoxication increases men's self-reported likelihood of committing rape but also that this effect is partially mediated by alcohol's impairment of executive cognitive functioning capacity.

Across studies, these findings encompass a broad sweep of factors that are pertinent to understanding alcohol-related acquaintance sexual assaults. Survey data showed that alcohol's role remains important and is multifaceted; experimental data demonstrated that some of alcohol's effects in such assaults can be genuinely causal. Some of the findings were consistent with interpretations drawn from alcohol expectancy theory and/or alcohol myopia theory. Formulations that integrate ideas from both theories would be worthwhile in future research, especially in conjunction with considering developmental periods and assault tactics that have an impact on victims and perpetrators. For instance, young men may drink and encourage a woman's drinking on the basis of alcohol expectancies that subsequently steer attention myopically toward rape-prone foci as intoxication rises, ensnaring both people in an unfortunate trajectory.

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REFERENCES

- Abbey A, McAuslan P. A longitudinal examination of male college students' perpetration of sexual assault. *J Consult Clin Psychol.* 2004; 72:747–756. [PubMed: 15482033]
- Abbey A, McAuslan P, Ross LT, Zawacki T. Alcohol expectancies regarding sex, aggression, and sexual vulnerability: reliability and validity assessment. *Psychol Addict Behav.* 1999; 13:174–182.
- Abbey A, Ross LT, McDuffie D, McAuslan P. Alcohol and dating risk factors for sexual assault among college women. *Psychol Women Q.* 1996; 20:147–169.
- Abbey A, Zawacki T, Buck PO, Clinton AM, McAuslan P. Sexual assault and alcohol consumption: what do we know about their relationship and what types of research are still needed? *Aggress Violent Behav.* 2004; 9:271–303.
- Baron RM, Kenny DA. The moderator-mediator variable distinction in social psychological research: conceptual, strategic and statistical considerations. *J Pers Soc Psychol.* 1986; 51:1173–1182. [PubMed: 3806354]
- Boone KB, Pontón MO, Gorsuch RL, Gonzalas JJ, Miller BL. Factor analysis of four measures of prefrontal lobe functioning. *Arch Clin Neuropsychol.* 1998; 13:585–595. [PubMed: 14590619]

- Brecklin LR, Ullman SE. The role of offender alcohol use in rape attacks: an analysis of national crime victimization survey data. *J Interpers Violence*. 2001; 16:3–21.
- Bureau of Justice Statistics. *Criminal Victimization in the United States*. U.S. Department of Justice; Washington, DC: 1995.
- Giancola PR. Evidence for dorsolateral and orbital prefrontal involvement in the expression of aggressive behavior. *Aggress Behav*. 1995; 21:431–450.
- Giancola PR, Zeichner A. The biphasic effects of alcohol on human physical aggression. *J Abnorm Psychol*. 1997; 106:598–607. [PubMed: 9358690]
- Gyls JA, McNamara JR. A further examination of validity for the Sexual Experiences Survey. *Behav Sci Law*. 1996; 14:245–260. [PubMed: 10160235]
- Judd CM, Kenny DA. Process Analysis: Estimating mediation in treatment evaluations. *Evaluation Review*. 1981; 5:602–619.
- Hoaken PN, Assaad J, Pihl RO. Cognitive functioning and the inhibition of alcohol-induced aggression. *J Stud Alcohol*. 1998; 59:599–607. [PubMed: 9718113]
- Koss MP, Dinero TE. Discriminant analysis of risk factors for sexual victimization among a national sample of college women. *J Consult Clin Psychol*. 1989; 57:242–250. [PubMed: 2708612]
- Koss MP, Gidycz CA, Wisniewski N. The scope of rape: incidence and prevalence of sexual aggression and victimization in a national sample of higher education students. *J Consult Clin Psychol*. 1987; 55:162–170. [PubMed: 3494755]
- Moffitt TE, Caspi A, Harrington H, Milne B. Males on the life-course persistent and adolescence-limited anti-social pathways: follow-up at age 26. *Dev Psychopathol*. 2002; 14:179–206. [PubMed: 11893092]
- Norris J, Kerr KL. Alcohol and violent pornography: responses to permissive and nonpermissive cues. *J Stud Alcohol Suppl*. 1993; 11:118–127. [PubMed: 8410953]
- Norris J, Nurius PS, Dimeff LA. Through her eyes: factors affecting women's perception of and resistance to acquaintance sexual aggression threat. *Psychol Women Q*. 1996; 20:123–145. [PubMed: 25705073]
- Norris, J.; Nurius, PS.; Gaylord, JE. Alcohol's relationship to recognizing and resisting sexual aggression; Paper presented at the meeting of the International Society for Research on Aggression; Mahwah, NJ. July 12, 1998; 1998.
- Sayette MA, Wilson GT, Elias MJ. Alcohol and aggression: a social information processing analysis. *J Stud Alcohol*. 1993; 54:399–407. [PubMed: 8341042]
- Seto MC, Barbaree HE. The role of alcohol in sexual aggression. *Clin Psychol Rev*. 1995; 15:545–566.
- Steele CM, Josephs RA. Alcohol myopia. Its prized and dangerous effects. *Am Psychol*. 1990; 45:921–933. [PubMed: 2221564]
- Stermac L, DuMont J, Dunn S. Violence in known-assailant sexual assaults. *J Interpers Violence*. 1998; 13:398–412.
- Stern RA, Prohaska ML. Neuropsychological evaluation of executive functioning. *Am Psychiatr Press Rev Psychiatry*. 1996; 15:243–266.
- Taylor, SP.; Leonard, KE. Alcohol and human physical aggression. In: Geen, RG.; Donnerstein, EI., editors. *Aggression: Theoretical and Empirical Reviews 2*. Academic Press; San Diego: 1983. p. 77–101.
- Testa M, Livingston JA. Qualitative analysis of women's experiences of sexual aggression: focus on the role of alcohol. *Psychol Women Q*. 1999; 23:573–589.
- Tyler KA, Hoyt DR, Whitbeck LG. Coercive sexual strategies. *Violence Vict*. 1998; 13:47–61. [PubMed: 9650245]
- Ullman SE. Review and critique of empirical studies of rape avoidance. *Criminal Justice Behav*. 1997; 24:177–204.
- Ullman SE, Knight RA. The efficacy of women's resistance strategies in rape situations. *Psychol Women Q*. 1993; 17:23–38.

Fig. 1. Hypothetical model of relationships among alcohol consumption, expectancies, cognitions, and resistance.