

Rape-Myth Congruent Beliefs in Women Resulting from Exposure to Violent Pornography

Effects of Alcohol and Sexual Arousal

Kelly Cue Davis

Jeanette Norris

William H. George

Joel Martell

University of Washington

Julia R. Heiman

Indiana University

Previous research findings indicate that women suffer a variety of detrimental effects from exposure to violent pornography. This study used an experimental paradigm to examine the effects of a moderate alcohol dose and alcohol expectancies on women's acute reactions to a violent pornographic stimulus. A community sample of female social drinkers ($N = 134$) read an eroticized rape depiction after completing an alcohol administration protocol. As predicted, intoxicated participants were less likely to label the depicted events as rape than their sober counterparts. A path analytic model illustrated that participants' self-reported sexual arousal to the stimulus, as influenced by alcohol consumption and expectancies, resulted in increased rape myth congruent perceptions of the victim and decreased labeling of the incident as rape. Findings suggest that acute alcohol intoxication during violent pornography exposure may ultimately result in women developing more calloused attitudes toward rape and rape victims.

Keywords: *rape myths; alcohol; pornography; sexual arousal*

Authors' Note: This study was supported by Grant AA07271 from the National Institute on Alcohol Abuse and Alcoholism to the second author. Correspondence concerning this article should be sent to Kelly Davis, University of Washington, Department of Psychology, Box 351525, Seattle, WA 98195; e-mail: kcue@u.washington.edu

Even though pornography¹ is not typically marketed toward women, most women experience some pornography exposure during their lifetimes because of its pervasiveness in our culture (Senn & Radtke, 1990). Several studies have shown that at least one half of all women surveyed have been exposed to pornography (Corne, Briere, & Esses, 1992; Cowan & Campbell, 1995; Stock, 1996) and that women can be negatively affected by pornography exposure in a number of ways, including mood disturbances (Senn & Radtke, 1990) and lowered self-esteem (Mayerson & Taylor, 1987). The current experiment examined women's acute reactions to violent pornography. We evaluated the hypothesis that the eroticization of violence and the presence of alcohol can—through their effects on sexual arousal—influence women's perceptions, making them more accepting of violent pornography.

Violent Pornography and Sexual Arousal

Violent pornography has been shown to have detrimental effects on women viewers. Studies of women's reactions to violent pornography reveal that such exposure is related to increased rape-supportive beliefs and fantasies, as well as increased victim blaming and decreased perpetrator responsibility (Corne et al., 1992; Cowan & Campbell, 1995). One possible mechanism underlying the connection between violent pornography exposure and increased acceptance of sexual aggression is sexual arousal. Pornography, even when depicting acts of violence, is designed to be sexually arousing. Thus, women may experience heightened sexual arousal in response to depictions of rape when these depictions are eroticized (Malamuth & Check, 1980). Typical rape myth supportive pornography (in which the female rape victim desires and enjoys being raped) blurs the line between sexual pleasure and sexual aggression, particularly for women who experience sexual arousal when viewing such depictions (Corne et al., 1992).

Findings from an experimental study of women's perceptions of rape myth supportive violent pornography provide some evidence for the speculation that women's sexual arousal in response to violent pornography is an important predictor of their perceptions of the pornographic material (Norris, Davis, George, Martell, & Heiman, 2004). In this study, women reported greater sexual arousal while reading an eroticized rape depiction in which the victim responded to the rape with pleasure rather than disgust. Path analyses indicated that women with increased sexual arousal in turn viewed the victim as more typical and rated themselves as more likely to behave like the victim. Thus, this previous study indicated that women who experienced sexual arousal on exposure to rape myth supportive pornography subsequently

normalized the depicted situation and viewed themselves as more likely to behave in rape myth supportive ways (Norris et al., 2004). However, because the rape myth that women enjoy being raped was clearly portrayed in this depiction, it left open the question of whether women, particularly those aroused by the erotic elements of the pornographic material, might impose rape myths onto a rape victim whose responses were more ambiguous (i.e., contained neither clear pleasure nor distress cues). Thus, we sought to expand this line of research by examining women's responses to an eroticized rape depiction in which the rape victim's response is left ambiguous.

Alcohol, Sexual Arousal, and Violent Pornography

The relationship between alcohol and sexual arousal is complex (Crowe & George, 1989; George & Stoner, 2000). Psychologically, alcohol may increase women's sexual arousal through expectations regarding alcohol's enhancing sexual effects (Leigh, 1990). Sex-related alcohol expectancies may be investigated directly through alcohol expectancy questionnaires or indirectly through the "activation" of such expectancies through an experimental expectancy set in which research participants are told that they will consume alcohol but may or may not actually do so. Although alcohol expectancy questionnaire studies consistently find that men and women endorse the belief that alcohol enhances sexual experiences (George & Stoner, 2000), experimental studies of alcohol's effects on women's sexual arousal are scant and yield somewhat contradictory findings.

Using a balanced placebo design in which alcohol expectancy set was manipulated independently of alcohol ingestion, Wilson and Lawson (1978) did not find an alcohol expectancy set effect on women's sexual responding; that is, women who believed that they had consumed alcohol were neither more nor less sexually aroused when viewing erotic films than women who believed they had consumed a nonalcoholic beverage. However, in an examination of alcohol's effects on women's perceptions of violent pornography, Norris et al. (2004) found an interaction of a priori sex-related alcohol expectancies and manipulated expectancy set, such that when women believed they had consumed alcohol (even though they had not), those with strong sex-related alcohol expectancies reported greater sexual arousal to violent pornography than those with weak sex-related alcohol expectancies.

Regarding actual alcohol ingestion, experimental studies utilizing varying alcohol doses have consistently found a significant negative linear relationship between alcohol dose and women's physiologically measured sexual responding, such that as alcohol levels increased, physiological

sexual arousal decreased (Malatesta, Pollack, Crotty, & Peacock, 1982; Wilson & Lawson, 1976, 1978). However, these studies also found a significant positive relationship between alcohol intoxication levels and women's self-reported sexual arousal, with greater intoxication resulting in greater self-reported arousal. Although more research is needed to explicate these desynchronous physiological and self-report assessments of female sexual arousal, survey and experimental studies indicate that women associate alcohol intoxication with a heightened experience of sexual arousal, despite physiological indices to the contrary.

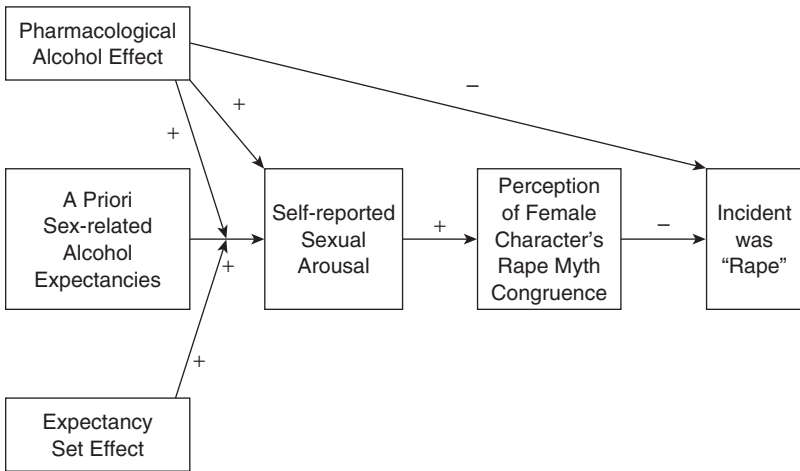
Alcohol may also influence women's perceptions of violent pornography independent of its effects on sexual arousal. Norris and Kerr (1993) found that intoxicated women who read a depiction of an eroticized rape perceived the rapist as using less force and as more socially acceptable than did sober women. Intoxicated women were also more likely to report a willingness to behave like a female rape victim described as feeling pleasure during the rape than were sober women (Norris & Kerr, 1993).

Current Study and Proposed Model

In summary, previous studies have indicated that women's pornography exposure, especially when women are intoxicated, increases their acceptance of rape myths and sexual aggression. The current study investigated a specific mechanism—sexual arousal—through which alcohol-related factors might influence women's reactions to an eroticized pornographic rape scenario. For the current investigation, we assessed women's self-reported experience of sexual arousal in response to a pornographic rape scenario, as well as their perceptions of the female rape victim's behavior and their likelihood of defining the eroticized violence as rape.

Based on previous studies, we predicted that women who consumed a moderate dosage of alcohol and women with stronger sex-related alcohol expectancies would report experiencing greater sexual arousal to violent pornographic material than would women who did not consume alcohol and women with weaker alcohol expectancies. We also predicted an interaction between these two factors, such that intoxicated women with strong sex-related alcohol expectancies would report the greatest amount of sexual arousal, relative to controls and those with weaker expectancies. In addition, similar to the findings presented in the Norris et al. (2004) study, we hypothesized an interaction between sex-related alcohol expectancies and expectancy set, such that women who believed they had consumed alcohol and had strong beliefs in alcohol's effects on sexuality would report greater

Figure 1
**Hypothesized Model Relating Alcohol Effects to Participants’
 Sexual Arousal, Perceptions of the Victim,
 and Labeling the Incident as Rape**



sexual arousal than women with low alcohol expectancies or women with high alcohol expectancies who did not believe they were drinking alcohol. We further expected that women reporting greater sexual arousal would subsequently be more likely to perceive the victim’s behavior as congruent with rape myths and less likely to define the incident as rape. We also hypothesized a direct relationship between alcohol intoxication and a decreased likelihood of defining the incident as rape. Figure 1 presents the full, hypothesized path model illustrating these predictions.

Method

Participants

Female social drinkers ($N = 134$) between ages 21 and 45 years were recruited through local newspaper advertisements in a large West Coast city. Callers were told that the study involved an examination of alcohol’s

effects on male–female interactions, and that they would receive up to U.S. \$40 for their participation. If callers were still interested, they were then screened to establish that they were free of health problems that would contraindicate alcohol consumption. Extremely heavy drinkers (more than 35 drinks per week), abstainers (fewer than one drink per week), and those with a history of alcohol abuse and/or treatment were excluded from the study. Participants reported drinking alcohol an average of one to two times per week, consuming an average of one to four drinks per occasion. Participants' mean age was 27.0 ($SD = 6.2$) years. Most (78.2%) identified themselves as White, 7.6% as Latino/Hispanic, 5.9% as Asian and/or Pacific Islander, and the remaining 8.4% as African American, Native American and/or American Indian, or other.

Materials

Stimulus story. A stimulus story of approximately 1,600 words was adapted from a story used in a prior experiment in which the victim's response (pleasure vs. distress) was manipulated (see Norris et al., 2004). After an initial dialogue between the male and female characters, establishing that each had consumed three to four glasses of wine, the male character then began to make sexual advances toward the female character. She expressed reluctance and confusion. His advances escalated while she resisted verbally and physically. After the first graphically described sex act, the female character responded in an ambiguous way for the remainder of the story, indicating neither distress nor pleasure in response to the male character's continued perpetration of several forced sexual activities. As an example, one ambiguous response in this story was "feelings flooded through her," as opposed to "feelings of shock flooded through her" (distress response) or "feelings of pleasure flooded through her" (pleasure response).

Pretest measures. Participants completed a demographics questionnaire that assessed age, ethnicity, and other pertinent information. In addition, they completed a sex-related Alcohol Expectancies Questionnaire (Leigh, 1990) that consisted of 14 items answered on a 4-point scale (1 = *not at all* to 4 = *very much*). A scale consisting of these 14 items was computed ($M = 2.26$, $SD = .66$, $\alpha = .92$).

Dependent measures. After reading the stimulus story, participants completed items assessing their responses to the story. All items were rated on

7-point scales (1 = *not at all* to 7 = *extremely*). Six items involved rating the participant's own sexual arousal (e.g., "How sexually aroused do you feel?"; "How much do you feel a tingling or throbbing sensation in your genitals?"). Five items assessed rape myth congruent perceptions of the female character's behavior (e.g., "How seductive was Heather's behavior toward Rick?"; "How likely is it that Heather only said 'no' so that Rick wouldn't think she was too 'loose' or 'easy'?"; "How much did Heather really want Rick to stop his behavior?" [reversed]). One item assessed participants' perceptions of the situation as rape ("To what extent do you think Rick's behavior was rape?").

For purposes of data reduction, we constructed scales from individual dependent items based on principal components factor analysis with varimax rotation. Two scales were utilized in the following analyses: a six-item scale for participant sexual arousal ($M = 2.17$, $SD = 1.26$, $\alpha = .94$) and a five-item scale for rape myth congruent perceptions of the female character's behavior ($M = 1.68$, $SD = .84$, $\alpha = .76$). The perceptions of the situation as rape item was analyzed as an individual item ($M = 5.82$, $SD = 1.62$).

Manipulation checks. Just before the final debriefing, participants were asked to complete a questionnaire to ascertain whether they were aware of hypotheses and/or manipulations. This questionnaire included the following three items: "How many ounces of liquor did you drink during this session?" "What do you think the purpose of this study was?" and "Do you believe any deception was involved in this study?" Based on the results, 12 participants were dropped because of alcohol expectancy manipulation failures. Another three participants were dropped because of computer malfunction. Thus, the final sample size was 119.

Procedure

On arrival a female experimenter checked the participant's identification for age and administered a breath analysis to ensure a breath alcohol concentration (BAC) of 0.0 gm%. Each participant provided informed consent and then completed a series of computerized questionnaires.

The participant was then randomly assigned to one of three beverage conditions: a moderate alcohol dose (expect and receive alcohol), placebo (expect alcohol and receive tonic), or control (expect and receive tonic). Standard double-blind procedures were employed. If the participant was assigned to either the alcohol or placebo conditions, she was required to self-administer a pregnancy test based on a urine sample

before participating in the alcohol manipulation portion of the experiment. The female bartender poured three drinks, the content of which differed according to experimental condition. The vodka was mixed in a 1:5 ratio with tonic. In the placebo condition, flat tonic was substituted for vodka. The target BAC for the alcohol condition was .06 gm%.

The bartender provided the expectancy manipulation by informing the participant that she had been assigned to the alcohol condition (for the alcohol and placebo conditions) or to the tonic condition. To enhance the believability of the expectancy manipulation, the cups used in the alcohol and placebo conditions had been sprayed with 100-proof vodka prior to the bartending procedure. In addition, each participant rinsed her mouth with nonalcoholic mouthwash just before consuming the beverage.

The participant had 3 minutes to consume each drink. She was then left alone for 20 minutes to absorb any alcohol consumed. During this period, the participant was provided a filler task to divert her attention from any physical sensations that might indicate actual beverage content. After 20 minutes, the bartender conducted a breath analysis and told the participant that either her BAC was still at 0.0 (for the control condition) or “about .06” (for the alcohol and placebo conditions), regardless of the true results of the analysis.

The participant read the stimulus story and completed the dependent measures in private. On completion, the experimenter debriefed and paid the participant. Participants who had received alcohol were not released until their BAC fell below .03 gm%.

Results

Preliminary Analyses

Achieved BACs. Manipulation of the participant beverage condition was checked through a one-way ANOVA on the participants' achieved blood alcohol levels, revealing a significant effect for participant beverage condition, $F(2, 116) = 357.21, p < .001$. A post hoc Scheffé analysis indicated that participants in the control condition ($M = .00$) and the placebo condition ($M = .00$) had significantly lower blood alcohol levels than participants in the alcohol condition ($M = .056$).

Estimating the Model

To test the model illustrated in Figure 1, path analysis using hierarchical multiple regression analyses was used following the procedures

recommended by Cohen, Cohen, West, and Aiken (2003). Because the participant beverage condition variable has three levels, two contrast codes were used to represent the effect for this variable. The pharmacological effect contrast code tested our a priori predictions regarding physiological effects of alcohol by comparing the alcohol condition to the placebo and control conditions. The expectancy set contrast code tested for an alcohol expectancy effect by comparing the placebo group to the control group.

The full model consisted of three regression equations in which each dependent variable was regressed on all variables to its left in the model. Participant sexual arousal, for example, was regressed on the hypothesized predictors of a priori sex-related alcohol expectancies (centered), the two beverage contrasts, and the two-way interactions between alcohol expectancies and the two beverage contrasts, as a block in one step.

Predicting participant sexual arousal. Table 1 presents a summary of the hierarchical multiple regression analyses. For participant sexual arousal, the regression equation was significant, predicting approximately 25% of the variance, $R^2\Delta = .246$, $p = .000$. A priori sex-related alcohol expectancies significantly predicted participant sexual arousal, $\beta = .355$, $p = .000$, such that participants with greater alcohol expectancies reported greater sexual arousal. Also as hypothesized, the \times pharmacological alcohol effect contrast significantly predicted participant sexual arousal, such that those participants who consumed alcohol reported greater sexual arousal than those participants who did not consume alcohol, $\beta = .263$, $p = .002$. In addition, the sex-related alcohol expectancies \times pharmacological effect contrast interaction significantly predicted participant sexual arousal, $\beta = .332$, $p = .000$. Post hoc analyses indicated that when participants reported strong sex-related alcohol expectancies and consumed alcohol, they experienced greater sexual arousal ($M = 3.51$, $SD = 2.02$) than participants with strong alcohol expectancies who did not consume alcohol ($M = 2.26$, $SD = .93$) and participants with weak alcohol expectancies in the alcohol ($M = 1.75$, $SD = .94$) and no alcohol conditions ($M = 1.67$, $SD = .69$). The hypothesis that sex-related alcohol expectancies and expectancy set would interact to predict sexual arousal was not upheld.

Predicting participants' rape myth congruent perceptions of the female character's behavior. The full regression equation was significant, $R^2\Delta = .166$, $p = .002$, predicting approximately 17% of the variance. As hypothesized, participant sexual arousal predicted ratings of the female character's sexual behavior, such that participants with higher sexual arousal rated the female

Table 1
Summary of Hierarchical Multiple Regression Analyses Predicting
Successive Levels of Outcomes in Estimated Path Model

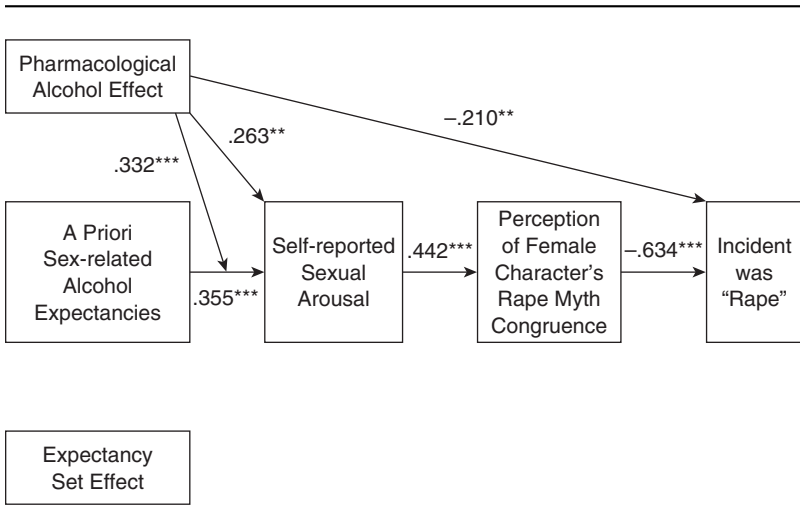
| Variables entered | Participant Sexual Arousal | | Character's Rape Myth Congruence | | Incident was Rape | |
|--|----------------------------|---------|----------------------------------|---------|-------------------|----------|
| | R^2 | β | R^2 | β | R^2 | β |
| Sex-related alcohol expectancies | | .355*** | | -.130 | | -.053 |
| Pharmacological effect contrast | | .263** | | -.146 | | -.210** |
| Expectancy set effect contrast | | -.031 | | .022 | | .080 |
| Expectancies \times Pharmacological Effect | | .332*** | | -.139 | | -.098 |
| Expectancies \times Expectancy Set | | .019 | | .123 | | .023 |
| Participant sexual arousal | | | | .442*** | | .107 |
| Character's rape myth congruence | | | | | | -.634*** |
| Total R^2 | .246*** | | .166*** | | .394*** | |

* $p < .05$. ** $p < .01$. *** $p < .001$.

character's behavior as more rape myth congruent, $\beta = .442$, $p = .000$. There were no other significant effects.

Predicting participants' perception of situation as rape. For participants' perception of the situation as a rape, the regression equation was significant, $R^2\Delta = .394$, $p = .000$, predicting approximately 39% of the variance. Participant perceptions of the female character's behavior significantly predicted their perceptions of the situation as rape, $\beta = -.634$, $p = .000$, with those who perceived the female character's behavior as more rape myth congruent being less likely to define the incident as rape. In addition, the alcohol pharmacological effect contrast significantly predicted perceptions of the situation as rape, $\beta = -.210$, $p = .009$. As hypothesized, compared to sober participants, intoxicated participants were significantly less likely to define the incident as rape. The final estimated model is illustrated in Figure 2.

Figure 2
Estimated Model Relating Alcohol Effects to Participants’
Sexual Arousal, Perceptions of the Victim, and
Labeling the Incident as Rape



Discussion

The findings of the current study indicate that alcohol-related factors are important predictors of women's responses to and perceptions of violent pornography. Alcohol intoxication directly decreased women's likelihood of labeling a violent pornographic sexual assault as rape. In addition, sex-related alcohol expectancies and alcohol consumption acted independently and interactively to reduce women's perceptions of the event as rape indirectly through the participants' sexual arousal and judgments regarding the female rape victim.

Regarding alcohol consumption effects, intoxicated women were less likely than their sober counterparts to label the described event as rape. Consistent with alcohol myopia models (Steele & Josephs, 1990), alcohol consumption appeared to have focused participants on instigatory sexual cues rather than on inhibitory violence cues, resulting in reduced perceptions of

the incident as rape. Compared to controls, drinkers also reported greater sexual arousal in response to the scenario. The response conflict model (Steele & Southwick, 1985), a variant of the more general alcohol myopia model, provides one basis for explaining women's increased sexual arousal to a violent, yet eroticized, pornographic scenario. The response conflict model theorizes that because sober individuals have the ability to focus their attention on instigatory and inhibitory cues, they may feel conflicted about engaging in "socially excessive" behaviors. However, when individuals are drinking, their attention is directed only toward instigatory, or permissive, cues. By focusing attention on instigatory rather than on inhibitory cues, alcohol intoxication reduces or eliminates any conflict individuals may feel about behaving in certain ways.

A sober woman might feel conflicted about becoming sexually aroused when reading a violent, pornographic scenario because she is presumably able to focus her attention on the eroticized elements of the story, which provide instigatory cues for becoming sexually aroused, and the male character's sexually aggressive behavior, which provides inhibitory cues for sexual arousal (Norris et al., 2004). According to the response conflict model of alcohol myopia, alcohol consumption would be expected to resolve a woman's conflict by focusing her attention primarily on the instigatory or pleasure cues, resulting in reduced conflict about experiencing sexual arousal, and thereby increasing her likelihood of becoming sexually aroused.

However, it is also important to note that the pharmacological effect of alcohol on arousal was intensified for women with strong a priori beliefs about alcohol's effects on sexuality. Thus, alcohol ingestion not only independently contributed to increased self-reported sexual arousal but also acted in concert with sex-related alcohol expectancies to increase women's sexual arousal when drinking. Consequently, women with greater beliefs about alcohol's effects on sexuality may be particularly susceptible to alcohol myopia effects on sexual arousal when intoxicated.

Regarding expectancy effects, women with stronger beliefs about alcohol increasing sexual responsiveness reported greater sexual arousal in response to the vignette than women with weaker sex-related alcohol expectancies, regardless of expectancy set. It is likely that because all participants read a story in which the characters were drinking, the presence of alcohol consumption in the pornographic scenario was primarily responsible for activating women's a priori beliefs about the role of alcohol in such situations (Norris et al., 2004). It is also possible that the presence of alcohol in the pornographic scenario served not only to activate women's alcohol expectancies but also may have imparted an air of permissiveness to the situation.

Compared to women with weaker sex-related alcohol expectancies, women who believed that alcohol increases sexual responding may have felt more comfortable becoming aroused and reporting their arousal to a violent pornographic stimulus involving alcohol. Norris et al. (2004) found that women reported greater sexual arousal on reading a violent pornographic story when the characters were drinking and when the victim experienced pleasure during the rape. The current finding extends this previous work regarding alcohol as a permissive situational cue in pornography to scenarios in which the female character's reactions during the rape are intentionally ambiguous. It appears that when a sexual situation involving alcohol has even a little room for interpretation, observers may draw on their own beliefs about alcohol's effects as a sexual disinhibitor and interpret the situation accordingly (George, Cue, Lopez, Crowe, & Norris, 1995).

Our hypothesis that expectancy set would interact with women's pre-existing beliefs to influence sexual arousal was not upheld. Although this null effect differs from findings of our previous work (Norris et al., 2004), it is consistent with other results regarding the influence of alcohol expectancy set on women's sexual arousal (Wilson & Lawson, 1976, 1978). Explanations for these discrepant findings remain elusive, particularly because of the dearth of experimental research regarding alcohol and female sexual arousal (Crowe & George, 1989). Based on the few studies conducted thus far, the circumstances under which expectancy set might affect women's responses to sexually explicit material have not been determined. Consequently, there is a great need for further investigation of the physiological and expectancy effects of alcohol on women's sexual arousal (Norris, 1994).

Women's sexual arousal, as influenced by alcohol-related factors, predicted important aspects of their perceptions of violent pornography. As discussed in Norris et al. (2004), sexual arousal appears to be a key component in women's perceptions of the rape victims portrayed in rape myth supportive pornography, perceptions that may ultimately result in increased rape myth acceptance on the part of the female pornography viewer. The current study extends that previous work by showing that women may experience increased sexual arousal to violent pornography even when the female character is not portrayed in a rape myth supportive fashion (i.e., as experiencing pleasure). The female character's reactions in the vignette used for the current study were expressly designed to be ambiguous, conveying neither distress nor pleasure; yet, increased self-reported sexual arousal directly predicted increased perceptions of the female character's behavior as corresponding with myths about rape (e.g., she really wanted the rape to happen). Perhaps some women interpreted the female

character's behavior through a rape myth congruent lens as a way of justifying or normalizing their own sexual arousal to an eroticized rape. By viewing the rape victim in this way, women were much less likely to define the described incident as *rape*, again perhaps normalizing their arousal to the depicted violence. Although it is important to note that ratings on both of these perception measures were well below (or above) the midpoint of the scales, it does appear that women who experience greater sexual arousal when viewing violent pornography may ultimately be at risk of endorsing increased blame of rape victims and increased lenience toward rapists.

The current study provides some evidence that sexual arousal to violent pornography, as influenced by alcohol-related factors, may serve as a pathway to increased rape myth acceptance in women; however, one limitation of these findings is that the extent to which these effects on women's perceptions remain after intoxication and arousal have subsided cannot be determined. Because the pornographic stimulus material was presented in a written format, it is also unknown if these findings would generalize to audiovisual presentations of violent pornography. Another limitation of the current study is the use of one moderate dose of alcohol, which does not allow us to generalize these findings to situations involving greater or lesser amounts of alcohol. In addition, because of our screening procedures, only moderate social drinkers were included in this sample, thus reducing the generalizability of the findings to abstainers and heavy drinkers. Finally, women's level of sexual arousal was based purely on their self-report. Future studies could incorporate physiological measures of sexual arousal to ascertain whether or not alcohol-related factors affect these two components of women's sexual arousal similarly.

Although the current study has limitations, it also provides evidence that alcohol consumption and expectancies directly and indirectly influence women's responses to and perceptions of violent pornography. As the availability and accessibility of pornography proliferates (Rich, 2001), more studies are needed regarding the short- and long-term effects of pornography, particularly violent pornography, on women's perceptions and attitudes. Future studies could also examine not only the extent to which women consume alcohol and pornography simultaneously but also the acute and chronic impact of viewing violent pornography in an intoxicated state. Finally, because alcohol-influenced sexual arousal predicts women's perceptions of violent pornography, the effects of alcohol on women's sexual arousal to violent and nonviolent sexual material merits further investigation.

Note

1. The term *pornography* in this article refers to any sexually explicit material that is sexist and degrading to women, such as that which portrays women as unequal or powerless sexual participants through behavior, setting, or props. The term *violent pornography* refers specifically to sexually explicit material that contains acts of violence perpetrated by a man against a woman.

References

- Cohen, J., Cohen, P., West, S. G., & Aiken, L. S. (2003). *Applied multiple regression/correlation analysis for the behavioral sciences* (3rd ed.). Mahwah, NJ: Lawrence Erlbaum.
- Corne, S., Briere, J., & Esses, L. M. (1992). Women's attitudes and fantasies about rape as a function of early exposure to pornography. *Journal of Interpersonal Violence, 7*, 454-461.
- Cowan, G., & Campbell, R. R. (1995). Rape causal attitudes among adolescents. *Journal of Sex Research, 32*, 145-153.
- Crowe, L. C., & George, W. H. (1989). Alcohol and sexuality: Review and integration. *Psychological Bulletin, 105*, 374-386.
- George, W. H., Cue, K. L., Lopez, P. A., Crowe, L. C., & Norris, J. (1995). Self-reported alcohol expectancies and postdrinking sexual inference about women. *Journal of Applied Social Psychology, 25*, 164-186.
- George, W. H., & Stoner, S. A. (2000). Understanding acute alcohol effects on sexual behavior. *Annual Review of Sex Research, 11*, 92-124.
- Leigh, B. C. (1990). The relationship of sex-related alcohol expectancies to alcohol consumption and sexual behavior. *British Journal of Addiction, 85*, 919-928.
- Malamuth, N. M., & Check, J. V. P. (1980). Sexual arousal to rape and consenting depictions: The importance of the woman's arousal. *Journal of Abnormal Psychology, 89*, 763-766.
- Malatesta, V. J., Pollack, R. H., Crotty, T. D., & Peacock, L. J. (1982). Acute alcohol intoxication and female orgasmic response. *Journal of Sex Research, 18*, 1-17.
- Mayerson, S. E., & Taylor, D. A. (1987). The effects of rape myth pornography on women's attitudes and the mediating role of sex role stereotyping. *Sex Roles, 17*, 321-338.
- Norris, J. (1994). Alcohol and female sexuality: A look at expectancies and risks. *Alcohol Health and Research World, 18*, 197-201.
- Norris, J., Davis, K. C., George, W. H., Martell, J., & Heiman, J. R. (2004). Victim's response and alcohol-related factors as determinants of women's responses to violent pornography. *Psychology of Women Quarterly, 28*, 59-69.
- Norris, J., & Kerr, K. L. (1993). Alcohol and violent pornography: Responses to permissive and nonpermissive cues. *Journal of Studies on Alcohol, (Suppl 11)*, 118-127.
- Rich, F. (2001, May 20). The naked capitalists. *New York Times Magazine*, 51.
- Senn, C. Y., & Radtke, H. L. (1990). Women's evaluations of and affective reactions to mainstream violent pornography, nonviolent pornography, and erotica. *Violence and Victims, 5*, 143-155.
- Steele, C. M., & Josephs, R. A. (1990). Alcohol myopia: Its prized and dangerous effects. *American Psychologist, 45*, 921-933.
- Steele, C. M., & Southwick, L. (1985). Alcohol and social behavior I: The psychology of drunken excess. *Journal of Personality and Social Psychology, 48*, 18-34.

Stock, W. E. (1996, August). *Women's pleasurable and coercive experiences of pornography.*

Paper presented at the meeting of the American Psychological Association, Toronto, Canada.

Wilson, G. T., & Lawson, D. M. (1976). Effects of alcohol on sexual arousal in women. *Journal of Abnormal Psychology, 85*, 489-497.

Wilson, G. T., & Lawson, D. M. (1978). Expectancies, alcohol, and sexual arousal in women. *Journal of Abnormal Psychology, 87*, 358-367.

Kelly Cue Davis, PhD, is a research scientist in the Department of Psychology at the University of Washington. Her research interests include the effects of alcohol on sexual decision making, sexual risk taking, and sexual violence.

Jeanette Norris, PhD, is a senior research scientist at the Alcohol and Drug Abuse Institute at the University of Washington. Her areas of research include the role of alcohol in sexual risk taking, condom negotiation, sexual victimization, and sexual aggression.

William H. George, PhD, is professor of psychology at the University of Washington and director of the UW Institute for Ethnic Studies in the United States. Much of his research focuses on understanding the effects of alcohol and alcohol expectancies on sexuality and sexual victimization.

Joel Martell, PhD, is a postdoctoral fellow in addictive behaviors at the University of Washington. His current research focuses on the effect of alcohol on men's perceptions of sexual assault.

Julia R. Heiman, PhD, is director of the Kinsey Institute for Research in Sex, Gender, and Reproduction, and professor of psychology and clinical psychiatry at Indiana University. She took over that post in June 2004, after 23 years at the University of Washington School of Medicine where she continues to collaborate on research projects. Her areas of research are sexual psychophysiology and related methods, sexual disorders, and treatment for sexual problems.