NIH Public Access
Author Manuscript
Exp Clin Psychopharmacol. Author manuscript; available in PMC 2012 December 30.

Published in final edited form as:
Exp Clin Psychopharmacol. 2011 October ; 19(5): 378–388. doi:10.1037/a0024792.

The Effects of Acute Alcohol Intoxication, Partner Risk Level, and General Intention to Have Unprotected Sex on Women's Sexual Decision Making with a New Partner

Michele Parkhill Purdie, Ph.D.,
Department of Psychology, Oakland University University of Washington

Jeanette Norris, Ph.D.,
Alcohol and Drug Abuse Institute, University of Washington

Kelly Cue Davis, Ph.D.,
School of Social Work, University of Washington

Tina Zawacki, Ph.D.,
Department of Psychology, University of Texas, San Antonio

Diane M. Morrison, Ph.D.,
School of Social Work, University of Washington

William H. George, Ph.D., and
Department of Psychology, University of Washington

Preston A. Kiekel, Ph.D.
Alcohol and Drug Abuse Institute, University of Washington

Abstract

Women account for a quarter of all new HIV/AIDS cases, with approximately 65% having contracted the infection via heterosexual contact (CDC, 2008). Few experimental studies have examined interactions among background, partner, and situational characteristics in predicting women's sexual decisions. The Cognitive Mediation Model provides a useful theoretical framework for assessing likelihood of unprotected sex (Norris, Masters, & Zawacki, 2004). Female social drinkers (n = 230) who had answered questions related to their general intention to have unprotected sex were randomly assigned to an experimental condition based on partner risk level (unknown, low, high) and beverage (control, placebo, low dose, high dose). Participants projected themselves into a story depicting a sexual situation with a man and answered questions about their cognitive appraisals, assertive condom request, and likelihood of unprotected sex. Alcohol effects on appraisal of sexual potential differed by partner risk condition. In the unknown and low risk conditions, placebo and alcohol participants appraised the situation as having greater sexual potential than controls whereas in the high risk condition, only those who consumed alcohol did so. Sexual potential appraisals in turn predicted impelling cognitions about having sex, which in turn predicted assertive condom request and unprotected sex intentions. General intention for unprotected sex independently predicted cognitive appraisals and outcomes. These findings

Correspondence concerning this article should be addressed to Michele Parkhill Purdie, Department of Psychology, Oakland University, Rochester, MI 48309. parkhill@oakland.edu.

highlight the need for prevention programs that focus on teaching women how to pay attention and consider sexual risk cues presented by potential partners, particularly when under the influence of alcohol.

Keywords

alcohol consumption; partner risk; condom use; condom request; risky sex

According to the Centers for Disease Control and Prevention, women account for a quarter of all HIV/AIDS cases, and approximately 65% of American women diagnosed with HIV/AIDS in 2007 were infected through heterosexual contact (CDC, 2008). Because using male condoms is an effective way to prevent transmission of HIV and other sexually transmitted infections (STIs), it is important to understand what influences women's ability to negotiate for use of a condom if their male partners are reluctant to use one, and ultimately whether to have unprotected sex.

Sexual decisions occur within particular situations, but situational decisions are influenced by individuals' past experiences and attitudes. Therefore, it is important to understand how such background factors interact with situational variables. Previous research has found that general intention to use a condom is strongly related to condom use overall; however, this variable has not been examined in specific contexts (Sheeran, Abraham, & Orbell, 1999). Situational alcohol consumption has been shown to influence several aspects of sexual decision making, including risk perception (Fromme, D'Amico, & Katz, 1999; Monahan, Murphy, & Miller, 1999; Murphy, Monahan, & Miller, 1998); appraisal of sexual potential (Norris et al., 2009); condom negotiation skills (Maisto, Carey, Carey, & Gordon, 2002; Maisto, Carey, Carey, Gordon, & Schum, 2004; Maisto et al., 2004); and unprotected sex intentions (Abbey, Saenz, Buck, Parkhill, & Hayman, 2006; MacDonald, MacDonald, Zanna, & Fong, 2000; Davis, Hendershot, George, Norris, & Heiman, 2007; Maisto et al., 2004; Stoner, George, Peters, & Norris, 2007). In addition, the amount and type of risk information about a partner may influence women's in-the-moment decisions, although the evidence is mixed (Abbey et al, 2006; Comer & Nemeroff, 2000; Reisen & Poppen, 1999). Thus, the purpose of this experiment was to investigate interactions among general intention to have unprotected sex, alcohol consumption, and partner risk on the process by which women make sexual decisions.

Cognitive Mediation of Sexual Decision Making

The Cognitive Mediation Model (CMM; Norris, Masters, & Zawacki, 2004) proposes that situational and background influences on sexual decisions are mediated through the cognitive appraisal of information obtained from the immediate situation. According to the CMM, which was derived from Cognitive-Motivational-Relational Theory (Lazarus, 1991), there are two types of cognitive appraisals. Primary appraisals involve initially evaluating a situation's relevance to, and likelihood of reaching, one's goals. In the case of a woman who is attracted to a particular man and may want to have sex with him, this appraisal would focus on the situation's sexual potential. If the woman appraises a situation as having sexual potential, she would then make a series of secondary appraisals. These would involve an evaluation of the harm or benefit that could result from having sex with the man. To the extent that the woman wants to use a condom, secondary appraisals lead to decisions about how assertively, and in what manner, she might request a condom and, ultimately, about whether she would have sex without a condom if one were not available or her partner refused to use one.

The CMM has been successfully applied to predicting women's condom request and intention to have unprotected sex in the context of alcohol consumption (Norris et al., 2009; Zawacki et al., 2009). However, it has not been applied to examining how information about a partner's risk status might influence appraisals associated with women's sexual decisions. Furthermore, although a previous study (Zawacki et al., 2009) demonstrated that the background factor of relationship motivation interacted with two situational factors – alcohol consumption and partner familiarity – to predict the primary cognitive appraisal of relationship potential, researchers have not yet demonstrated how other background factors interact with situational variables in predicting cognitive appraisals and situational sexual decisions. Thus, using the CMM as a guide, the current study examined the interplay of two situational factors - acute alcohol intoxication and a hypothetical partner's sexual risk status – and the background variable of general intention to have unprotected sex in predicting women's cognitive appraisals of sexual potential and intention to assertively request a condom and engage in unprotected sex.

Alcohol, Cognitive Appraisals, and Sexual Decisions

Experimental studies have demonstrated that acute alcohol intoxication can increase appraisal of a situation's sexual (Norris et al., 2009) and relationship (Zawacki et al., 2009) potential and in turn lead to increased endorsement of secondary appraisals related to condom request and unprotected sex intentions. Further, in some studies, alcohol consumption has directly decreased assertive condom negotiation (Maisto, Carey, Carey, & Gordon, 2002; Maisto, Carey, Carey, Gordon, & Schum, 2004; Maisto et al., 2004) and increased unprotected sex intentions (Abbey et al., 2006; Davis et al., 2007; MacDonald, Fong, Zanna, & Martineau, 2000; MacDonald, MacDonald et al., 2000; MacDonald, Zanna, & Fong, 1996; Maisto et al., 2004; Stoner et al., 2007).

Alcohol can affect sexual judgments through two processes. First, through its cognitive effects, alcohol can impair one's ability to focus on cues that would inhibit risky behavior (Cooper, 2002; Steele & Josephs, 1990; Taylor & Leonard, 1983). After drinking, therefore, women may be less likely to focus on a man's sexual risk and more likely to focus on the pleasurable nature of an interaction. According to the CMM, focusing on such impelling cues may in turn result in intoxicated women assessing an interaction with a man as having greater sexual potential than sober women would. This primary appraisal of sexual potential would lead, in turn, to heightened impelling cognitions related to lowered assertive condom request and heightened unprotected sex intentions.

Alcohol can also affect sexual decisions through learned expectancy effects. Researchers can examine these effects through the use of a placebo condition (Marlatt & Rohsenow, 1980). Most experimental studies have not found evidence for expectancy effects on likelihood of having unprotected sex (Abbey et al., 2006; Fromme et al., 1999; MacDonald et al., 1996; Zawacki et al., 2009). However, some studies have shown that expectancy effects decreased perceptions of partner risk (Monahan et al., 1999; Murphy et al., 1998). Thus, the present study included a placebo condition to further examine possible expectancy effects on initial appraisals of a partner's sexual potential under differing partner risk conditions.

General Intention to Have Unprotected Sex

The intention to engage in safer sex has received considerable attention within health behavior models predicting likelihood of using condoms in future sexual interactions (Ajzen, 1991; Ajzen & Fishbein, 1974; Sheeran et al., 1999). Past research has shown that intentions are one of the strongest and most consistent predictors of behavior (Sheeran et al., 1999). Although this relationship is strong, behavioral intentions do not perfectly predict

behavior (Sheeran et al., 1999). A woman may have a general intention to request that her partner use a condom but, depending on the specific circumstances surrounding an interaction, this intention may not be enacted. Thus, the present study examined the role of women's general intention to have unprotected sex within the situational context of alcohol consumption and information about a potential partner's sexual risk history.

Partner Risk and Alcohol Consumption

Little research has examined how information about a partner's sexual risk affects women's sexual decisions. Many women evaluate a partner's risk level using irrelevant characteristics, such as personal appeal or familiarity (Comer & Nemeroff, 2000; Knauper, Kornik, Atkinson, Guberman, & Aydin, 2005; Masaro, Dahinten, Johnson, Ogilvie, & Patrick, 2008; Williams et al., 1992). They often conclude that because someone is likable, he must not have an STI and, therefore, do not request the use of a condom (Buysse, 1998; Carter, McNair, Corbin, & Williams, 1999; Green, Fulop, & Kocsis, 2000; Knauper et al., 2005; Williams et al. 1992). However, some research has shown that presenting information indicating that a partner is high risk can lead to higher perception of risk and increased condom use intentions (Reisen & Poppen, 1999).

Because many women have sex with a partner of unknown risk status after consuming alcohol (Parks, Hsieh, Collins, Levonyan-Radloff, & King, 2009), it is important to understand how information about the partner affects their decisions after drinking. Few studies have examined a hypothetical partner's sexual risk level in conjunction with alcohol intoxication. Abbey et al. (2006) found that partner risk level interacted with alcohol to predict interest in dating a hypothetical opposite-sex partner. Among intoxicated participants, partner risk had no effect on interest in dating the person; however, sober participants expressed more interest in dating a low risk than a high risk partner. Murphy et al. (1998) found that women who believed they had consumed alcohol (regardless of whether or not they actually had) rated a high risk male character as significantly less risky than women who did not believe they had consumed alcohol. Given the paucity of studies in this area, further research is needed to examine how acute alcohol intoxication affects the process by which women make decisions about partners for whom they have different types and amount of risk information.

Overview of Study and Hypotheses

Using the CMM as a theoretical foundation, this experiment investigated the process by which general intention to have unprotected sex, alcohol consumption, and partner risk type may influence women's assertive condom request and unprotected sex intentions in a hypothetical interaction with a man. Prior to the experimental portion of the study, participants rated their general intention to have unprotected sex in the future with different types of partners. They were then randomly assigned to one of four beverage conditions (control, placebo, low dose, or high dose) and to one of three partner risk types (low, high, or unknown) before projecting themselves into a story depicting a sexual interaction with a man.

To test the hypothesized model represented in Figure 1, we employed a multi-group modeling approach (Muthen & Muthen, 2004). Multi-group modeling allows researchers to test the factor structure of the relationships described in a hypothesized model to determine similarities across models (Rigdon, Schumacker, & Wothke, 1998). In our model, we simultaneously tested three sub-models: one model representing each partner risk condition.

Our hypotheses were divided into two sets. First, based on past investigations of the CMM (Norris et al., 2009; Zawacki et al., 2009), we hypothesized that the basic tenets of the model

would be replicated here. Using path analysis, we expected that primary appraisals of sexual potential would lead to increased secondary appraisals related to having sex with and without a condom. We expected that these heightened secondary appraisals would, in turn, be negatively related to assertive condom request intention. Finally, we expected assertive condom request to be negatively related to unprotected sex intention.

The second set of hypotheses concerned the background and situational factors that precede the cognitive appraisal process. Because having sex with a man who evidences high sexual risk increases a woman's chances of contracting HIV or other STIs, a woman has to balance this information against the possibility of obtaining pleasure from the sexual encounter. Because alcohol impairs one's cognitive ability to adequately assess situational cues (Steele & Josephs, 1990; Taylor & Leonard, 1983), we believed that having an already formed intention to have unprotected sex would likely tip the balance toward focusing on pleasure cues. Thus, we expected to find a significant interaction between general intention to have unprotected sex and alcohol consumption in the high partner risk condition. Specifically, we hypothesized that women in the high partner risk condition who consumed alcohol and who had a higher general intention to have unprotected sex would rate the situation as having the highest sexual potential and be most likely to pursue sexual activity with the man, compared to other women in this condition.

In the low partner risk condition, the man posed little risk to the woman. Thus, we expected that women who had expressed a tendency to have unprotected sex or who had consumed alcohol would focus on the situational pleasure cues and thus be likely to appraise the situation as sexual. In other words, we expected main effects for both general intention to have unprotected sex and alcohol consumption.

Previous research (Masaro et al., 2008; Williams et al., 1992) has shown that women who have no direct information about a man's sexual risk behave as if he were low risk. Therefore, we expected that women in the unknown risk condition would respond similarly to women in the low partner risk condition. That is, we expected main effects for both general intention to have unprotected sex and alcohol consumption.

Consistent with the CMM (Norris et al., 2004) and earlier research (Zawacki et al., 2009), we hypothesized that in both the unknown and low partner risk conditions, the effects of the background variable would operate mainly on primary appraisals. However, given the strength of the relationship between behavioral intentions and unprotected sex found in past studies (Sheeran et al., 1999), we recognized the possibility that this variable could be directly related to the outcomes of assertive condom request and unprotected sex intention.

Method

Participants

Participants were 234 women recruited through posted flyers in places that would attract the attention of young women such as advertisements in local newspapers. On average, participants were 25.27 years old (*SD* = 3.79). Sixty two percent were Caucasian, 11% were African-American, 6% were Asian, 3% were American Indian or Alaskan Native, 9% were multiracial, and 9% classified themselves as other. Nine percent identified their ethnicity as Hispanic. Thirty-three percent were either full- or part-time students. Mean number of drinks per week was 10.96 (*SD* = 9.69).

Procedures

Interested individuals contacted the lab and were screened to ensure eligibility. Participants were required to be single social drinkers (more than one drink but less than 40 drinks per

week) between the ages of 21 and 35, and not currently taking any medications that would contraindicate alcohol consumption. Abstainers and those with a history of problem drinking were excluded. To enhance the likelihood that participants would find the experimental story to be realistic and self-relevant, participants were required to have had sexual intercourse with a man and to not currently be in a committed relationship.

Eligible participants were scheduled, told not to eat for three hours prior to their appointment, and not to drive to the lab. The session consisted of two parts: the first involved completing a set of background measures, while the second involved completing the alcohol administration protocol, reading the experimental story, and completing the dependent measures.

Upon arrival, the participant was seated in a private room and given a breath analysis test (Alco-Sensor IV, Intoximeters Inc., St. Louis, MO) to confirm a blood alcohol level (BAL) of zero. The participant then verified her health screening information and gave informed consent. After receiving instructions on the use of the desktop computer, she was left alone to complete a series of background measures. Afterwards, the experimenter debriefed the participant, explained the second portion of the session, and obtained informed consent for the second part of the study.

In the second portion of the session, the participant consumed an experimental beverage (see below) before being left alone to read a stimulus story (see below) and complete the dependent measures. Intoxicated participants remained in the lab until their BALs descended to below .03% at which point they were either picked up or provided bus fare. At the end of the session, the participant was debriefed, paid $15/hour, and given information regarding HIV and STI prevention. All procedures were approved by the University of Washington Human Subjects Division.

Beverage administration—Participants were randomly assigned to one of four drink conditions: control, placebo, low dose alcohol (target BAL = 0.04%), or high dose alcohol (target BAL = 0.08%). A supervisor assigned the drink condition and instructed the experimenter to use one of four vodka bottles, the contents of which were unknown to the experimenter. Each vodka bottle contained either 100-proof vodka (alcohol conditions) or flattened tonic water plus a small amount of vodka (placebo condition). Alcohol dose was determined by weight. For participants in the alcohol and placebo conditions, vodka or flattened tonic water, respectively, was mixed in a 1:4 ratio with orange juice and poured evenly into three cups. Participants in the control condition received an equivalent volume of pure orange juice. All beverage cups (except for participants in the control conditions) were misted with 100-proof vodka and each drink contained a squirt of lime juice previously mixed with a small amount of vodka. Drinks were mixed in front of the participant using a brand name bottle of vodka. Participants were given three minutes to consume each of the three cups of the beverage. In order to disguise the lack of alcohol in the placebo condition, all participants were instructed to rinse with a small amount of mouthwash and were told that this would ensure a more accurate breathalyzer reading. Control participants also received breathalyzer readings to ensure uniformity in procedures across alcohol conditions.

In the alcohol conditions, participants were given a 5-minute absorption period and were then breathalyzed every 2 to 5 minutes until they reached a criterion BAL of .025% (low dose) or .055% (high dose). These criterion BALs were selected to ensure that participants began reading the story while their BALs were ascending toward the target. After participants reached the criterion BAL, she immediately began reading the stimulus story. Each alcohol participant had a control participant “yoked” to her to control for individual variation in time to criterion BAL. The yoked control participant was breathalyzed at the

same time points and began reading the story after the same number of minutes as her counterpart in the alcohol condition (Giancola & Zeichner, 1997; Schacht, Stoner, George, & Norris, 2010).

In addition to control participants being yoked to either a low or high dose participant, a placebo participant was yoked to each low dose participants; no placebos were yoked to high dose participants because of known difficulties in maintaining successful placebo deception for high doses (Sayette, Breslin, Wilson, & Rosenblum, 1994). Thus, low dose participants had both a low dose control and a placebo participant yoked to them. In total, 92 participants were assigned to the control condition (n = 46 controls yoked to low dose participants and n = 46 controls yoked to high dose participants), 45 were assigned to the placebo, 46 to the low dose, and 47 to the high dose conditions. The experimenter breathalyzed the placebo participant at the same time point at which her yoked alcohol participant had reached the criterion BAL. The experimenter told the placebo participant she was right on target with a BAL of .027%, after which she started reading the story at the same time point as the low dose participant to whom she had been yoked.

Stimulus story—Participants read a story that depicted a social interaction between a woman and a man who were attracted to each other but had never had sexual intercourse. The story was written in the second person and the participant was instructed to project herself into the story. The beverage consumed in the story matched the participant's expected alcohol condition; participants in the placebo, low alcohol, and high alcohol conditions read a version of the story in which the couple consumed alcoholic beverages and those in the control condition read a version in which the couple consumed non-alcoholic beverages. This beverage matching was done to enhance the realism of the story for the participant since she was supposed to be the woman in the story.

The story began with a conversation between the woman (i.e., the participant) and a female friend, Anita, in which Anita invited her to Anita's boyfriend's place to watch movies and mentioned that Nick, the boyfriend's roommate, would be there. The woman commented on Nick's attractiveness and her interest in getting to know him. The evening progressed with Nick and the woman talking, watching movies, and drinking either alcoholic or nonalcoholic drinks depending on the beverage condition.

The group moved into Nick's bedroom to look up something on the computer. Once the woman and Nick were alone in Nick's room, the two began to kiss. The story continued with descriptions of their escalating passionate sexual acts until both were undressed. At this point, they discovered that neither of them could locate a condom. The story portrayed the woman as being on the Pill to avoid having pregnancy risk as the main concern for using a condom. The story was paused at several points to assess condom request strategies and intention to have unprotected sex. The story ended with Nick suggesting that they engage in vaginal penetration without a condom.

Information about Nick's sexual history was embedded in the story and manipulated to create three levels of risk. In an effort to keep Nick's likability consistent across conditions, partner risk was manipulated through the reported behavior of Nick's ex-girlfriend and Nick's STI testing in this context. In the *high partner risk condition*, Nick said that his ex-girlfriend had been cheating on him with several other guys and did not always use condoms; he intended to get tested for STIs but hadn't yet. In the *low partner risk condition*, Nick said that his ex-girlfriend did not want to be in an exclusive relationship any longer and broke off the relationship to start dating other guys; although they had been monogamous, and just to be safe, Nick had recently had an STI test which came back negative. In the *unknown partner risk condition*, Nick said that his ex-girlfriend had started dating another

man and although she told Nick she had never had sex with the other man, Nick was unsure; he recently had an STI test but had not yet received the results. In all conditions, Nick said he had not had sex with anyone since he and his ex-girlfriend broke up.

Measures

General intention to have unprotected sex—In the background measures, participants were asked how likely they were to have sexual intercourse without a condom in the future with a new male partner, a steady male partner, a male ex-partner, a male partner whose sex risk is unknown, and to have sex with no birth control (items formed by authors). Responses were rated on 7-point scales ranging from 0 (*not at all likely*) to 6 (*very likely*). Items were averaged to form a scale ($M = 2.04$; $SD = 2.00$; Cronbach's $\alpha = .81$).

Primary appraisal of sexual potential—Primary appraisal of sexual potential focused on the early expectation and desire of the woman and Nick to have sex (Norris et al., 2009). All responses were rated on 7-point Likert scales that ranged from 0 (*not at all*) to 6 (*extremely*). This measure was composed of five items ($M = 3.58$; $SD = 1.24$; Cronbach's $\alpha = .84$): How much does Nick want to have sex with you?, How much do you want to have sex with Nick even if you don't think it will actually happen?, How much does Nick expect to have sex with you?, How much do you expect to have sex with Nick?, and How likely are you to have sex with Nick in this situation?

Secondary appraisals: Impelling cognitions—These items were designed to assess women's impelling cognitions related to having sex, first in the situation in general, and second specifically after it became apparent that no condom was available (Norris et al., 2009). The first assessment occurred after both Nick and the woman had no clothes on their upper bodies, but it was not yet apparent that no condom was available (Before No Condom); the second occurred after petting continued and the woman requested a condom, but the pair discovered that neither had one (After No Condom). Participants responded to 20 impelling statements before they realized there was no condom and 16 impelling statements afterward. These items were developed in part from earlier focus groups with women recruited in the same way as in the present study (Norris, 2005). All items were assessed on 5-point Likert scales from 0 (*not at all important*) to 4 (*extremely important*). Cognitions Before No Condom focused on whether to have sex in general, for instance: Having sex now would feel great. Cognitions After No Condom focused on having sex without a condom and included questions such as: It would feel better for him not to use a condom. Because of the high correlations among the cognitions across the two timepoints, ratings of impelling cognitions were averaged across both assessment points ($M = 1.62$; $SD = .61$). Cronbach's α was .91.

Assertive condom request—Questions related to condom request strategies were asked after the initial realization in the story that one was not available. Six items from the Direct Request and Withholding Subscales of the Condom Influence Strategy Scale (Noar, Morokoff, & Harlow, 2002) assessed participants' likelihood of assertively requesting a condom. Example items include: How likely would you be to ask Nick to use condoms during sex? and How likely would you be to let Nick know that no condoms means no sex? These items used 7-point Likert scales ranging from 0 (*definitely unlikely*) to 6 (*definitely likely*). Items were averaged to form a scale ($M = 4.71$; $SD = 5.17$; Cronbach's $\alpha = .92$).

Likelihood of unprotected sex—Three questions formed by the authors assessed likelihood of sex without a condom after Nick suggested doing so: How likely are you to have sex with Nick?; How likely are you to rub your clitoris against Nick's penis without a condom?; and How likely are you to allow Nick to put his penis inside your vagina without

a condom? Responses were rated on 7-point scales ranging from 0 (*definitely unlikely*) to 6 (*definitely likely*). Items were averaged to form a scale ($M = 2.09$; $SD = 1.67$; Cronbach's $\alpha = .86$).

Results

Manipulation Checks

Four women in the control condition who believed they had consumed alcohol and indicated that they felt intoxicated were deleted from further analyses, thus reducing the sample size to 230. There were no placebo manipulation failures. Participants in the low alcohol condition had a mean BAL of .034% ($SD = .008$) immediately before reading the stimulus story and a mean BAL of .033% ($SD = .007$) after completing dependent measures. Participants in the high alcohol condition had a mean BAL of .062% ($SD = .007$) just before reading the stimulus story and a mean BAL of .079% ($SD = .012$) after completing the dependent measures. This demonstrates that participants were on the ascending limb or at peak BAL while completing the dependent measures.

Participants rated their level of perceived intoxication on a scale of 0 (*not at all intoxicated*) to 6 (*extremely intoxicated*) before the experimental story and at the end of the dependent measures. Prior to reading the story, women in all four beverage conditions significantly differed from one another in perceived intoxication, $F(3,226) = 260.94$, $p < .001$ ($M_{\text{high alc}} = 4.19$, $SD_{\text{high alc}} = 1.04$; $M_{\text{low alc}} = 3.57$, $SD_{\text{low alc}} = 0.89$; $M_{\text{placebo}} = 2.38$, $SD_{\text{placebo}} = 1.54$; $M_{\text{control}} = 0.05$, $SD_{\text{control}} = 0.34$). Likewise, after completing the dependent measures, women in all four beverage conditions still significantly differed from one another in their perceived intoxication, $F(3,226) = 121.64$, $p < .001$ ($M_{\text{high alc}} = 4.15$, $SD_{\text{high alc}} = 1.40$; $M_{\text{low alc}} = 3.30$, $SD_{\text{low alc}} = 1.43$; $M_{\text{placebo}} = 2.78$, $SD_{\text{placebo}} = 1.61$; $M_{\text{control}} = 0.23$, $SD_{\text{control}} = 0.94$).

The current study operationalized alcohol consumption by utilizing simple coding procedures for regression models. The first code (expectancy effect) contrasted control participants with placebo participants. To test the pharmacological effect of alcohol, the second code contrasted control participants with alcohol participants (both .04 and .08 participants combined). Preliminary analyses showed that the effects of the low and high dose groups on primary appraisals did not differ from each other for any partner risk group; thus, they were collapsed for all analyses.

Data Analytic Plan

To test the model represented in Figure 1, we employed a multi-groups modeling approach using Mplus 3.0 (Muthen & Muthen, 2004). Multi-groups modeling tests whether the factor structure underpinning the relationships described in Figure 1 were similar across all partner risk conditions (Rigdon et al., 1998). Therefore, within a single Mplus model, a path analysis was run for each partner risk condition. Mplus then determines model fit using information derived from all three models. Maximum likelihood estimation was selected because it is robust to violations of normality (Chou & Bentler, 1995). Model fit was assessed with several absolute and incremental fit indices, including chi-square, root mean square error of approximation (RMSEA), and comparative fit index (CFI; Bentler, 1990; Bentler & Bonett, 1980; Bollen, 1989; Browne & Cudeck, 1993). Although a nonsignificant χ^2 demonstrates that the model fits well, it is dependent on sample size and significant values are often accepted if other indicators of fit are good. RMSEA values less than .08 and CFI values over .90 indicate good fit (Browne & Cudeck, 1993; Hoyle, 1995).

Bivariate Analyses

All significant correlations among the measured variables were in the expected directions (see Table 1). Across all three partner risk conditions, primary appraisals were positively correlated with secondary appraisals, which were negatively correlated with assertive condom request and positively correlated with likelihood of engaging in unprotected sex. Finally, assertive condom request and likelihood of engaging in unprotected sex were negatively correlated at each level of partner risk. Furthermore, across all three partner risk conditions, general intention to have unprotected sex was negatively related to assertive condom request and positively related to likelihood of unprotected sex. In the low and high risk conditions, general intention was also positively related to secondary appraisals.

Multiple Regression Analyses

Given the number of contrast codes and possible interaction terms that existed across the models and resulting concerns about power, multiple regression analyses were used to simplify later path analytic models. A series of hierarchical multiple regression analyses were run to examine the significance of the general predisposition by alcohol contrast interaction on primary appraisals within each partner risk group (Cohen, Cohen, West, & Aiken, 2003). The first set of analyses examined the two-way interaction between general predisposition and the pharmacological effect contrast code (control vs. alcohol participants). The first step included general predisposition and the pharmacological contrast code; the second step included the multiplicative interaction term. Across all three partner risk conditions, the interaction term was not a significant predictor of primary appraisals, unknown: B = .04, t(77) = 0.14, p = ns; low: B = −.25, t(75) = −1.57, p = ns; high: B = .16, t(75) = 0.84, p = ns. The second set of analyses examined the two-way interaction between general predisposition and the expectancy effect contrast code (control vs. placebo participants). The first step included general predisposition and the expectancy contrast code; the second step included the multiplicative interaction term. Across all three partner risk conditions, the interaction term was not a significant predictor of primary appraisals, unknown: B = .42, t(77) = 1.29, p = ns; low: B = .03, t(75) = 0.13, p = ns; high: B = .21, t(75) = 0.77, p = ns. Because the two-way interactions were not significant in any of the above analyses, the interaction term was dropped from the path analytic models; therefore, only main effects were examined.

Path Analyses

The hypothesized path model was tested such that paths not represented by lines in Figure 1 were not estimated. This model was tested across all three partner risk conditions but did not fit the data well, χ^2 (42, 230) = 126.50, $p < .05$; RMSEA = .162; CFI = .72. Because this model did not fit well, the correlations presented in Table 1 and the modification indices from the model above were used to guide the addition of three paths in an iterative fashion. The first, a path from secondary appraisals to likelihood of unprotected sex is consistent with the CMM in that likelihood of unprotected sex is an outcome that can be directly affected by secondary appraisals. Two other paths, from general intention to secondary appraisals in the low and high partner risk conditions and from general intention to assertive condom request in all three partner risk conditions, were added to allow for the possibility that general intention to have unprotected sex may be directly related to secondary appraisals and condom request intention. Each addition slightly increased model fit so that the final revised model fit the data well, χ^2 (33, 230) = 38.83, p = ns; RMSEA = .048; CFI = .98. This final revised model served as the comparison model for the invariance testing (see Figure 2).

Across all partner risk conditions, all hypothesized paths related to the CMM (i.e., relationships among primary appraisals, secondary appraisals, assertive condom request, and

likelihood of unprotected sex) were significant and in the expected directions (see Figure 2). Appraising the situation as having higher sexual potential was positively related to endorsement of secondary appraisals. The more women believed that the situation had sexual potential, the more they endorsed impelling cognitions related to having sex. These impelling cognitions were negatively related to assertive condom request intention and positively related to unprotected sex intention. Finally, assertive condom request and unprotected sex intention were negatively related.

In addition to the paths related to the CMM, several other paths were consistent across all three partner risk conditions. First, there was a significant negative relationship between general intention to have unprotected sex and assertive condom request and a significant positive relationship with secondary appraisals. Additionally, general intention to have unprotected sex was positively related to primary appraisal for sexual potential. Regarding the alcohol effects, both the pharmacological contrast code and the expectancy contrast code were positively related to primary appraisals across all three risk conditions.

To determine if the paths estimated across the risk conditions in this comparison model were invariant, a fully constrained model was compared to the final revised model presented above. The fully constrained model fit the data well, χ^2 (53, 230) = 64.82, p = ns; RMSEA = .054; CFI = .96 and was not significantly different from the comparison model, $\Delta \chi^2$ (20, 230) = 25.99, p = ns. The lack of differences between the fully constrained model and the comparison model suggest that there are no differences between the partner risk groups (see Figure 3). Overall, the model accounts for 41.4%, 42.8%, and 46.8% of the variance in likelihood of unprotected sex in the unknown sex risk, low sex risk, and high sex risk groups respectively.

To verify this, each path was successively held invariant and compared to the model fit of the comparison model presented above. Every path was found to be invariant across the risk conditions except one: the path from the expectancy contrast code to primary appraisals, χ^2 (35, 230) = 46.81, p = ns; RMSEA = .066; CFI = .96; $\Delta \chi^2$ (2, 230) = 7.98, $p < .05$. To further investigate this difference in models, the path from the expectancy contrast code to primary appraisals was held invariant across two groups at a time. The first model tested the invariance of this path across the unknown and low sex risk conditions. Overall, the model fit well and was not significantly different from the comparison model, χ^2 (34, 230) = 38.86, p = ns; RMSEA = .043; CFI = .98; $\Delta \chi^2$ (1, 230) = 0.03, p = ns. The second model tested the invariance of this path across the unknown and high sex risk groups, χ^2 (34, 230) = 44.89, p = ns; RMSEA = .065; CFI = .96; $\Delta \chi^2$ (1, 230) = 6.06, $p < .05$. The final model tested the invariance of this path across the low and high sex risk groups, χ^2 (34, 230) = 45.16, p = ns; RMSEA = .065; CFI = .96; $\Delta \chi^2$ (1, 230) = 6.33, $p < .05$. Overall, the results indicate that the path from the expectancy contrast to primary appraisals in the high sex risk group was significantly different from the same path in both the unknown risk group and the low risk group. This suggests that the influence of beverage condition differed across partner risk conditions. In the unknown and low partner risk conditions, those in the placebo and alcohol conditions rated the situation as having more sexual potential than those in the control condition. In the high risk condition, however, there was only a significant pharmacological effect such that those who consumed alcohol believed the situation had more sexual potential than those in the control condition.

Discussion

This study provided some support for both sets of hypotheses, the first of which concerned replication of the Cognitive Mediation Model (Norris et al., 2004). We hypothesized that the basic tenets of the model would be replicated as in past studies (Norris et al., 2009), and this

study did so. In all three partner risk conditions, the higher the appraisal of sexual potential, the greater the endorsement of secondary appraisals, that is, impelling cognitions related to having unprotected sex. In other words, the more women wanted and thought that sexual intercourse would occur, the stronger the benefits she believed there would be to not requesting a condom and to engaging in unprotected sex. Finally, the greater the endorsement of impelling cognitions, the less likely participants were to endorse assertive condom request and the more likely they were to endorse having unprotected sex.

The second set of hypotheses concerned the background and situational factors that preceded the cognitive appraisals. We hypothesized, but did not find, an interaction between alcohol intoxication and general intention to have unprotected sex among women who received the high partner risk version of the story. Although we predicted only main effects of alcohol intoxication and general intention among women who received the low or unknown partner risk version, we found that the path from general intention to primary appraisal was only significant among women who received the high risk partner condition. However, this path was invariant across the risk conditions so although it was significant in the high partner risk condition, the beta was not significantly different from the other conditions. We predicted that general intention to have unprotected sex could be related to later outcomes due to the strong relationship between behavioral intentions and unprotected sex (Sheeran et al., 1999). Consistent with these hypotheses, women's general intention to have unprotected sex negatively predicted assertive condom request in all three risk conditions. Unexpectedly, it also predicted secondary appraisals across all three risk conditions, but was not directly related to unprotected sex intention in any condition. These findings are consistent with previous work (Knauper et al., 2005), which indicates that motivational processes play a role in sexual decisions.

In both the low and unknown partner risk conditions, there was an expectancy effect such that those in the placebo condition had stronger primary appraisals than those in the control condition in addition to a pharmacological effect showing that those in the alcohol conditions had stronger primary appraisals than those in the control condition. In this society, alcohol consumption and sex are closely connected (George & Stoner, 2000), raising the expectation that when a man and a woman are drinking together, sex will occur. Therefore, simply believing that one has consumed alcohol may be sufficient to increase women's appraisals of sexual potential in a clearly sexual situation. However, actually consuming alcohol had a stronger effect. Faced with a low risk partner or a partner whose sexual risk is unknown, the expectation of having sex after drinking was apparently enhanced and resulted in heightened appraisal of sexual potential. Concomitantly, alcohol's myopia effect focused women on both the low risk of the partner and pleasure cues inherent in the situation, leading to the same outcome.

Finally, in the high partner risk condition, alcohol had only a pharmacological effect such that women who consumed alcohol appraised the situation as more sexual than those in the control condition. In this condition, even though the partner's risk was salient, the myopic properties of alcohol apparently focused women on the prominent pleasure cues embedded in the story and produced higher sexual potential ratings than were produced by those who had received a placebo beverage. This finding is consistent with previous research showing that alcohol consumption produced a myopia effect that resulted in higher intentions to have unprotected sex when pleasure cues are prominent (MacDonald, MacDonald et al., 2000). On the other hand, it appears to contradict work by MacDonald, Fong et al. (2000) in which alcohol consumption appeared to decrease unprotected sex intention somewhat when inhibitory cues were salient. Although McDonald, Fong et al.'s findings were only marginally significant, preliminary evidence suggests that in the presence of strong inhibitory cues and the absence of impelling cues, participants may actually be less likely to

engage in unprotected sex. In contrast, in the present study, participants were instructed to project themselves into a lengthy and highly sexually arousing story, depicting a sexual encounter with a desirable man. Thus, as may occur in actual sexual situations, pleasure cues were likely more prominent than inhibitory cues related to the man's sexual history.

Limitations

Experimental studies control dosage and allow causal inferences to be made, but also require participants to indicate what they think they would do in a hypothetical situation. Therefore, experimental studies cannot completely replicate naturalistic settings in which women are faced with making actual sexual decisions. Future research should examine the extent to which experimental studies generalize outside of the laboratory. Additionally, the current experimental paradigm matched the beverage consumed in the story to the participant's expected alcohol condition; therefore, women who received, or expected to receive, alcohol read a story in which the couple consumed alcoholic beverages. Although this did not allow differences between the control and placebo conditions to be unambiguously interpreted, having participants' expected beverage condition match their story character's condition made the situation more realistic since participants were told to project themselves into the story. Finally, although this study accounted for a large percentage of the variance in unprotected sex intention, there are likely other individual difference and situational variables that may be important as well.

Prevention and Intervention Implications

Women rarely have all of the information needed to make an accurate assessment of a potential male partner's risk (Williams et al., 1992). Given that most men have an "unknown" risk level, this study suggests that if women have no information with which to gauge a man's sexual risk, they may treat him as though he is low risk, especially when drinking. Prevention and intervention programs could benefit from using this information to teach women that when they do not have any information about a man's sexual risk, he should be treated as high risk. This is especially true for women who have been drinking alcohol. Programs should also focus on the role of alcohol in evaluating a potential partner's sexual risk, since many women are likely to engage in unprotected sex after drinking even when high risk cues are prominent. More specifically, programs should focus on educating women about how alcohol's psychological and pharmacological effects increase sexual risk-taking, regardless of a potential partner's sexual risk. The current study demonstrates that this increase may occur through women's cognitive appraisals of a situation. Programs that focus on challenging and changing women's cognitive appraisals in sexual situations should be developed.

Acknowledgments

This research was supported by grant R01AA014512 from the National Institute on Alcohol Abuse and Alcoholism to the second author.

References

Abbey A, Saenz C, Buck PO, Parkhill MR, Hayman LW Jr. The effects of acute alcohol consumption, cognitive reserve, partner risk, and gender on sexual decision-making. Journal of Studies on Alcohol. 2006; 67:113–121. [PubMed: 16536135]

Ajzen I. The theory of planned behavior. Organizational Behavior and Human Decision Processes. 1991; 50:179–211.

Ajzen I, Fishbein M. Factors influencing intentions and the intention-behavior relation. Human Relations. 1974; 27:1–15.

Bentler PM. Comparative fit indices in structural models. Psychological Bulletin. 1990; 107:238–246. [PubMed: 2320703]

Bentler PM, Bonett DG. Significance tests and goodness-of-fit in the analysis of covariance structures. Psychological Bulletin. 1980; 88:588–606.

Bollen, KA. Structural equations with latent variables. Wiley; New York: 1989.

Browne, MW.; Cudeck, R. Alternative ways of assessing model fit. In: Bollen, KA.; Long, JS., editors. Testing structural equation models. Sage; Newbury Park, CA: 1993. p. 136-162.

Buysse A. Safer sexual decision making in stable and casual relationships: A prototype approach. Psychology & Health. 1998; 13:55–66.

Carter JA, McNair LD, Corbin WR, Williams M. Gender differences related to heterosexual condom use: The influence of negotiation styles. Journal of Sex and Marital Therapy. 1999; 25:217–225. [PubMed: 10407794]

Centers for Disease Control and Prevention. HIV/AIDS Surveillance Report. Vol. Vol 20. US Department of Health and Human Services; Atlanta: 2008.

Chou, CP.; Benter, PM. Estimates and tests in structural equation modeling. In: Hoyle, RH., editor. Structural equation modeling: Concepts, issues, and applications. Sage; Thousand Oaks, CA: 1995. p. 37-55.

Cline RJW, Freeman KE, Johnson SJ. Talk among sexual partners about AIDS: Factors differentiating those who talk from those who don't. Communication Research. 1990; 17:792–808.

Cohen, J.; Cohen, P.; West, SG.; Aiken, LS. Applied multiple regression/correlation analysis for the behavior sciences. 3rd ed. Erlbaum; Mahwah, NJ: 2003.

Comer LK, Nemeroff CJ. Blurring emotional safety with physical safety in AIDS and STD risk estimations: The casual/regular partner distinction. Journal of Applied Social Psychology. 2000; 30:2467–2490.

Cooper ML. Alcohol use and risky sexual behavior among college students and youth: Evaluating the evidence. Journal of Studies on Alcohol. 2002; 14(Suppl):101–117.

Davis KC, Hendershot CS, George WH, Norris J, Heiman J. Alcohol's effects on sexual decision making: An integration of alcohol myopia and individual differences. Journal of Studies on Alcohol and Drugs. 2007; 68:843–851. [PubMed: 17960302]

Fromme K, D'Amico E, Katz EC. Intoxicated sexual risk taking: An expectancy or cognitive impairment explanation? Journal of Studies on Alcohol. 1999; 60:54–63. [PubMed: 10096309]

Giancola PR, Zeichner A. The biphasic effects of alcohol on human physical aggression. Journal of Abnormal Psychology. 1997; 106:598–607. [PubMed: 9358690]

George WH, Stoner SA. Understanding acute alcohol effects on sexual behavior. Annual Review of Sex Research. 2000; 11:92–124.

Green J, Fulop N, Kocsis A. Determinants of unsafe sex in women. International Journal of STD & AIDS. 2000; 11:777–783. [PubMed: 11138911]

Hoyle, RH. Structural equation modeling: Concepts, issues, and applications. Sage; Thousand Oaks, CA: 1995.

Knäuper B, Kornik R, Atkinson K, Guberman C, Aydin C. Motivation moderates the underestimation of cumulative risk. Personality and Social Psychology Bulletin. 2005; 31(11):1511–1523. [PubMed: 16207770]

Lazarus, RS. Emotion and adaptation. Oxford University Press; New York: 1991.

MacDonald TK, Fong GT, Zanna MP, Martineau AM. Alcohol myopia and condom use: Can alcohol intoxication be associated with more prudent behavior? Journal of Personality and Social Psychology. 2000; 78:605–619. [PubMed: 10794369]

MacDonald TK, MacDonald G, Zanna MP, Fong GT. Alcohol, sexual arousal, and intentions to use condoms in young men: Applying Alcohol Myopia Theory to risky sexual behavior. Health Psychology. 2000; 19:290–298. [PubMed: 10868774]

MacDonald TK, Zanna MP, Fong GT. Why common sense goes out the window: The effects of alcohol on intentions to use condoms. Personality and Social Psychology Bulletin. 1996; 22:763–775.

Maisto SA, Carey MP, Carey KB, Gordon CM. The effects of alcohol and expectancies on risk perception and behavioral skills relevant to safer sex among heterosexual young adult women. Journal of Studies on Alcohol. 2002; 63:476–485. [PubMed: 12160107]

Maisto SA, Carey MP, Carey KB, Gordon CM, Schum JL. Effects of alcohol and expectancies on HIV-related risk perception and behavioral skills in heterosexual women. Experimental and Clinical Psychopharmacology. 2004; 12:288–297. [PubMed: 15571446]

Maisto SA, Carey MP, Carey KB, Gordon CM, Schum JL, Lynch KG. The relationship between alcohol and individual differences variables on attitudes and behavioral skills relevant to sexual health among heterosexual young adult men. Archives of Sexual Behavior. 2004; 33:571–584. [PubMed: 15483371]

Marlatt, GA.; Rohsenow, DJ. Cognitive processes in alcohol use: Expectancy and the balanced placebo design. In: Mello, NK., editor. Advances in Substance Abuse. Vol. Vol. 1. JAI Press, Inc; Greenwich, CT: 1980. p. 159-199.

Masaro CL, Dahinten VS, Johnson J, Ogilvie G, Patrick DM. Perceptions of sexual partner safety. Sexually Transmitted Diseases. 2008; 35:566–571. [PubMed: 18354343]

Monahan JL, Murphy ST, Miller LC. When women imbibe: Alcohol and the illusory control of HIV risk. Psychology of Women Quarterly. 1999; 23:643–651.

Murphy ST, Monohan JL, Miller LC. Inference under the influence: The impact of alcohol and inhibition conflict on women's sexual decision making. Personality and Social Psychology Bulletin. 1998; 24:517–528.

Muthen, LK.; Muthen, BO. User's guide. 3rd ed. Muthen & Muthen; Los Angeles: 2004. Mplus: The comprehensive modeling program for applied researchers.

Noar SM, Morokoff PJ, Harlow LL. Condom negotiation in heterosexually active men and women: Development and validation of a condom negotiation strategy questionnaire. Psychology and Health. 2002; 17:711–735.

Norris, J. Alcohol and Women's Cognitive Mediation of HIV Risk Taking. Paper presented at the NIAAA Working Group Meeting on Prevention of Alcohol-Related HIV/AIDS Risk; Bethesda, MD. April 28-29; 2005.

Norris J, Masters NT, Zawacki T. Cognitive mediation of women's sexual decision making: The influence of alcohol, contextual factors, and background variables. Annual Review of Sex Research. 2004; 15:258–296.

Norris J, Stoner SA, Hessler DM, Zawacki T, George WH, Morrison DM, Davis KC. Cognitive mediation of alcohol's effects on women's in-the-moment sexual decision making. Health Psychology. 2009; 28:20–28. [PubMed: 19210014]

Parks KA, Hsieh Y, Collins RL, Levonyan-Radloff K, King LP. Predictors of risky sexual behavior with new and regular partners in a sample of women bar drinkers. Journal of Studies on Alcohol & Drugs. 2009; 70:197–205. [PubMed: 19261231]

Reisen CA, Poppen PJ. Partner-specific risk perception: A new conceptualization of perceived vulnerability to STDs. Journal of Applied Social Psychology. 1999; 29:667–684.

Rigdon, EE.; Schumacker, RE.; Wothke, W. A comparative review of interaction and nonlinear modeling. In: Schumacker, RE.; Marcoulides, GA., editors. Interaction and nonlinear effects in structural equation modeling. Lawrence Erlbaum; Mahwah, NJ: 1998. p. 1-16.

Sayette MA, Breslin F, Wilson G, Rosenblum GD. An evaluation of the balanced placebo design in alcohol administration research. Addictive Behaviors. 1994; 19:333–342. [PubMed: 7942250]

Schacht RL, Stoner SA, George WH, Norris J. Idiographically-determined versus standard absorption periods in alcohol administration studies. Alcoholism: Clinical & Experimental Research. 2010; 34:925–927. PMID: 20331574.

Sheeran P, Abraham C, Orbell S. Psychosocial correlates of heterosexual condom use: A meta-analysis. Psychological Bulletin. 1999; 125:90–132. [PubMed: 9990846]

Steele CM, Josephs RA. Alcohol myopia: Its prized and dangerous effects. American Psychologist. 1990; 45:921–933. [PubMed: 2221564]

Stoner SA, George WH, Peters LM, Norris J. Liquid courage: Alcohol fosters risky sexual decision-making in individuals with sexual fears. AIDS and Behavior. 2007

Taylor, SP.; Leonard, KE. Alcohol and human physical aggression. In: Geen, RG.; Donnerstein, EJ., editors. Aggression: Theoretical and Empirical Reviews, Issues in Research. Vol. Vol. 2. Harper Collins; New York: 1983. p. 77-101.

Williams SS, Kimble DL, Covell NH, Weiss LH, Newton KJ, Fisher JD, Fisher WA. College students use implicit personality theory instead of safer sex. Journal of Applied Social Psychology. 1992; 22:921–933.

Zawacki T, Norris J, Hessler DM, Morrison DM, Stoner SA, George WH, Davis KC, Abdallah DA. Effects of relationship motivation, partner familiarity, and alcohol on women's risky sexual decision making. Personality and Social Psychology Bulletin. 2009; 35:723–736. [PubMed: 19332435]

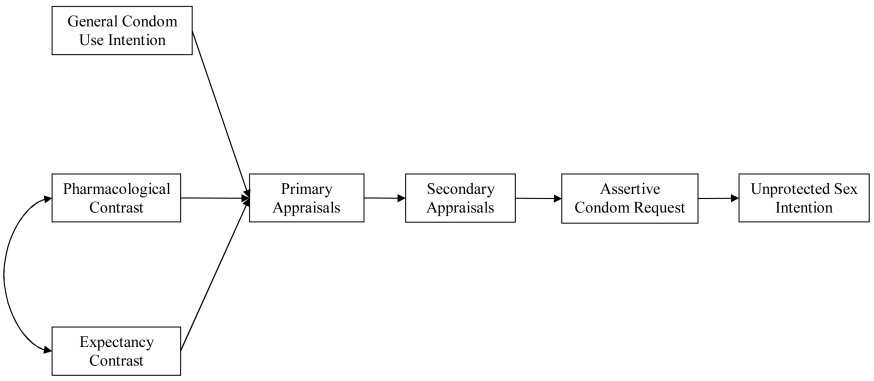

Figure 1.
Original hypothesized model across all partner risk groups.

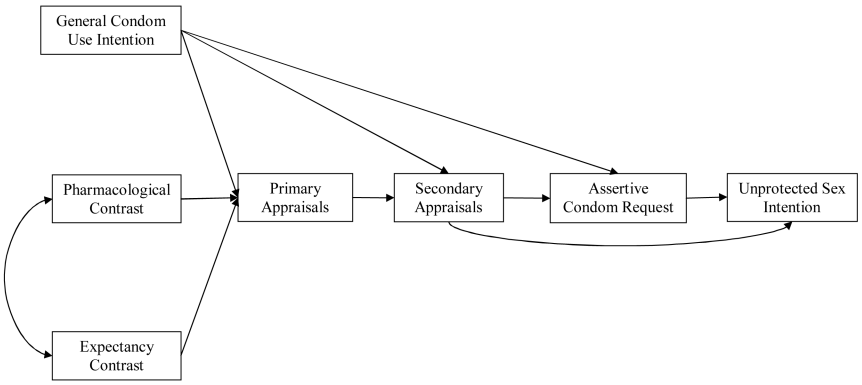

Figure 2.
Final comparison model across all partner risk groups.

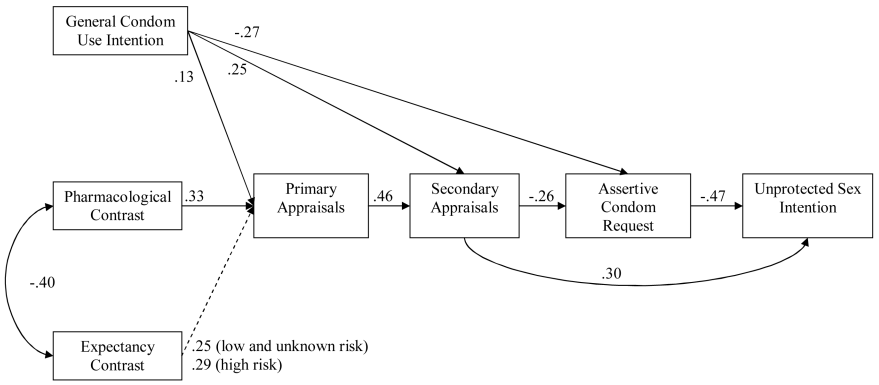

Figure 3.

Final model across all three risk groups illustrating the effects of alcohol and general intention to have unprotected sex on the Cognitive Mediation Model. Standardized loadings from the unknown risk model are presented. (Note that even though the path loadings are invariant, there are slight differences in the standardized loadings across the risk conditions). All paths significant at $p < .05$.

Table1

Means, Standard Deviations, and Correlations among Predictor Variables

	M	SD	1	2	3	4	5	6	7
Unknown Partner Risk (n = 78)									
1. General Intention: Unprotected Sex	1.82	1.24	--						
2. Expectancy Effect Contrast	--	--	−0.22	--					
3. Pharmacological Effect Contrast	--	--	0.09	−0.39*	--				
4. Primary Appraisal: Sexual Potential	3.59	1.33	0.11	0.12	0.25*	--			
5. Secondary Appraisal: Impelling Cog.	1.58	0.59	0.22	−0.06	0.20	0.57*	--		
6. Assertive Condom Request	4.79	1.52	−0.28*	−0.06	0.09	−0.18	−0.37*	--	
7. Unprotected Sex Likelihood	1.81	1.85	0.26*	0.05	0.00	0.21	0.44*	−0.52*	--
Low Partner Risk (n = 76)									
1. General Intention: Unprotected Sex	2.04	1.49	--						
2. Expectancy Effect Contrast	--	--	0.18	--					
3. Pharmacological Effect Contrast	--	--	−0.09	−0.41*	--				
4. Primary Appraisal: Sexual Potential	3.75	1.10	0.15	0.13	0.37*	--			
5. Secondary Appraisal: Impelling Cog.	1.77	0.61	0.41*	−0.04	0.16	0.40*	--		
6. Assertive Condom Request	4.41	1.62	−0.59*	−0.29*	0.11	−0.10	−0.46*	--	
7. Unprotected Sex Likelihood	2.52	1.98	0.41*	0.07	0.05	0.25*	0.54*	−0.58*	--
High Partner Risk (n = 76)									
1. General Intention: Unprotected Sex	2.27	1.49	--						
2. Expectancy Effect Contrast	--	--	−0.01	--					
3. Pharmacological Effect Contrast	--	--	−0.08	−0.42*	--				
4. Primary Appraisal: Sexual Potential	3.42	1.26	0.21	−0.21	0.24*	--			
5. Secondary Appraisal: Impelling Cog.	1.51	0.62	0.36*	0.04	−0.10	0.35*	--		
6. Assertive Condom Request	4.91	1.34	−0.35*	0.00	−0.15	−0.10	−0.35*	--	
7. Unprotected Sex Likelihood	1.95	2.06	0.35*	0.02	0.12	0.34*	0.53*	−0.67*	--

* $p < .05$.