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## Gender Differences In Alcohol Expectancies: Influence Of Context And Specificity Of Items

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Gender Differences In Alcohol Expectancies:  
Influence Of Context And Specificity Of Items

by

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A dissertation submitted in partial fulfillment  
of the requirements for the degree of  
Doctor of Philosophy  
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## Gender Differences in Alcohol Expectancies: Influence of Context and Specificity of Items

Andrea H. Weinberger

### ABSTRACT

Studies of alcohol expectancies have been equivocal regarding the existence of gender differences. A review of past studies suggested variables that could be useful for future studies such as investigating context-specific expectancies. The current study was designed to investigate the influence of context and item content on gender differences in expectancies. Undergraduate students who reported going to bars once a month or more (N = 321) completed an expectancy measure either while imagining themselves in a bar situation (Context condition) or with no contextual instructions (No Context condition). The expectancy measure consisted of expectancies that were “general” (Social and Tension Reduction expectancies) and those developed to be more “specific” to a bar context (Sexual Activity and Attention expectancies). It was expected that context and gender would interact so that gender differences would occur only for the endorsement of “specific” expectancies when context was specified; however, the gender x condition interaction was not significant for any type of expectancy and there were few main effects for condition. Main effects for gender were found partially following the hypothesized pattern. Men were more likely to endorse Sexual Activity expectancies, as expected, but women were not more likely to endorse Attention expectancies. Also as



expected, men and women equally endorsed Social expectancies; however, women endorsed Tension Reduction expectancies more strongly than, not equally to, men. Additional gender differences were found for the evaluation of expectancies and when defining ambiguous expectancy terms (“hook up” and “sexual attention”). The findings of this study offer some evidence that the relationship between expectancies and context of drinking and the interpretation of items may be useful areas for continued research. There was also some suggestion that men and women endorse, evaluate, and interpret sexually related expectancies differently. It may be useful to further examine whether these different responses relate to differences in sexual behavior, sexual vocabulary, or the ways that men and women respond to sexually related items on questionnaires. Information on the ways that men and women endorse and evaluate expectancy items could be incorporated into prevention or intervention efforts to make them more successful.

## Introduction

The purpose of the current study was to investigate the influence of context on gender differences in alcohol expectancies. It was hypothesized that men and women would differ in their endorsement and evaluation of alcohol expectancies for a bar situation. It was also predicted that these differences would depend on the presence of an alcohol context and the specificity of the expectancy items.

In general, the study of gender differences is complicated. Researchers have debated various political, theoretical, and methodological aspects of the issue. These topics have been discussed in several volumes of the *American Psychologist* (e.g., Archer, 1996a, 1996b; Eagly 1987, 1995, 1997) and in special issues of the *Psychology of Women Quarterly* and *Feminism & Psychology*. One debate has been over the basic issue of whether “gender differences” should be studied at all. While some believe that gender differences should be reported in every study regardless of the study’s focus (e.g., Eagly, 1987), others argue that gender differences should never be reported (e.g., Baumeister, 1988). A more moderate group suggests reporting differences only if there is a theoretical explanation (e.g., McHugh, Koeske, & Frieze, 1986).

The topic of gender differences is interesting not just to researchers, but also to the popular media. Stories about gender and gender differences are frequently seen in the headlines of print and television media (e.g., *Time*, 1992; *New York Times*, 1995). Unfortunately, the media may turn complicated issues associated with research on

gender into brief and flashy stories. In addition, they may misrepresent or exaggerate the size of differences, focus more on differences than similarities (Hyde, 1994a), and concentrate more on biological than cultural explanations for differences (Hyde, 1994a; James, 1997). The attention that the media pays to research on gender differences only increases the importance of issues in conducting this research. It is important that research of high quality be done because the media will focus on such studies and to prevent misinformation to the extent possible.

Those who oppose studying gender differences emphasize the political ramifications of such research. According to Baumeister (1988), it was important to emphasize gender in the past because women were largely ignored in early psychological research. In these studies, only men were recruited and it was assumed that information learned from men could simply be generalized to women. Studying gender differences became important to prevent this bias from continuing. A growing awareness of this bias has led to increased inclusion of women in research studies. Baumeister (1988) argues that it is no longer necessary to focus on gender now that researchers are aware of the bias and include women in studies. From this perspective, the continuation of gender difference research only perpetuates stereotypes and discrimination. Critics of gender difference research worry that gender difference research keeps men and women in separate categories (e.g., “male jobs” or “female jobs”) and serves to maintain or justify differential treatment based simply on gender (Baumeister, 1988; Hare-Mustin & Marecek, 1994; Hollway, 1994). Their view is that reducing attention on male and female differences would lead to a reduction in these negative outcomes.

Proponents of gender difference research offer a different perspective on these issues. They posit that women are not yet equally represented in current research. Although Baumeister (1988) suggested that study of gender differences is now moot, Rothblum (1988) disagrees because studies continue to be biased toward including more men than women in their samples. It has been suggested that it is important to focus on gender differences to prevent unjustified generalization of results from one gender to the other.

Critics suggest that research on gender differences will *maintain* stereotypes about men and women. However, proponents argue that conducting such research in a careful and scientific manner is the best way to *dispel* undeserved stereotypes (Halpern, 1994). Stereotypes about what men and women “can” or “should” do may continue until research provides evidence that gender-defined stereotypes are incorrect or limited. In addition, the way that results are presented may maintain or dispel stereotypes (Hyde, 1994b). For example, results can be framed two ways: as “deficits” or “differences.” Results that are presented as “differences” may be less likely to reinforce negative stereotypes than those presented as “deficits.” Proponents point out that gender difference studies are not inherently negative and may provide the field with a “richer and more differentiated picture of gendered behavior” (Eagly, 1994, p. 518). Eagly (1994, 1995) and Halpern (1994) encourage openness to all types of information that can be learned from research on gender whether it reflects differences, similarities, stereotype-consistent, or stereotype-inconsistent findings.

Another issue raised by critics of gender difference research is that reporting differences between men and women does not explain the process behind these

differences. In other words, reporting that men and women differ on a task or skill does not provide any information about why they are different. In fact, finding a difference between men and women “is a question, not an answer” (Baumeister, 1988, p. 1093) and ignores the process behind such differences (Hare-Mustin & Marecek, 1994). They explain that few gender differences are due to biology, but are more likely a result of social or cultural factors such as status, socialization, or expectations of normative behavior. Reporting gender differences without exploring the process behind these differences may lead some to overestimate the role of biology. Biological and sociocultural explanations of gender differences have different implications for the uses of research findings. For example, biological variables may be viewed as less mutable while cultural variables could be targeted for further research and intervention. On the other hand, cultural explanations could make unwelcome comments about society (e.g., that a system is being maintained where women are of lower status than men) and therefore more politically charged.

Proponents of gender difference research offer a different perspective on causes of gender differences. These researchers (e.g., Eagly, 1995, McHugh *et al.*, 1986) agree that most differences are not biological and that other variables (e.g., status, expectancies) help to explain when gender differences occur. The most recent explorations into gender suggest that differences between men and women are a result of complex interactions between biology and culture (Wood & Eagly, 2002). The difference between the two groups of researchers is that proponents believe that research on gender differences should be continued “but care should be taken not to focus on sex alone as the explanation for it” (James, 1997, p. 223). Proponents recognize the obstacles to

conducting research on gender differences (e.g., the media, confounding other variables with gender) and suggest that such research not be abandoned but rather conducted with care and attention to the issues.

Those supporting the study of gender differences tend to agree with most of the criticisms brought forth by opponents. They recognize that research outcomes are political in nature and interesting to the media. Proponents also acknowledge that finding a difference is not the end of the research questions – it is also important to examine the process behind the variables. Those who argue for the study of gender differences view the area of research as complicated and believe that studies should be done intelligently and responsibly. It is important to define variables carefully, present results clearly, and to not speak beyond the findings of the study. For example, McHugh *et al.* (1986) and Worell and Etaugh (1994) have suggested guidelines that researchers can follow when considering gender in research. These guidelines address many of the concerns brought up by critics of gender difference research. For example, they include recognizing the important role context plays in gendered behavior, understanding that there is more variability in behavior within gender than between genders, and exploring both social and biological explanations for gender differences.

One more debate about gender research should be mentioned. This issue concerns the language used when studying the behavior of men and women and is mentioned here to clarify the language that will be used in the rest of this paper. There has been discussion regarding which term is more appropriate to use: “sex differences” or “gender differences.” According to Helgeson’s (2002) *The Psychology of Gender*, “sex” is defined as “the biological categories of male and female, categories distinguished by

genes, chromosomes, and hormones” (p. 3). Although this definition uses biology to define men and women, certain conditions (e.g., androgen insensitivity syndrome, see Angier, 1999) complicate the classification. “Gender” is defined in the same text as “a much more fluid category: it refers to the social categories of male and female” (p. 3). Some researchers refer to “sex differences” within their text while others refer to “gender differences.” For this study, only the term “gender differences” will be used. Based on Hyde’s (1994b) definition, “gender differences” will be used to refer to differences between men and women that may be a result of biological and/or sociocultural factors. The phrase “gender differences” is consistent with the language of most studies on gender that will be reviewed.

Although the merits of conducting gender difference research have been debated, the proponents offer strong argument for the continuation of such research in a thoughtful manner. The current study will focus on one area of gender difference research: gender differences with regard to alcohol expectancies. Alcohol expectancies have been well established with regard to their relationship to drinking behavior and problems. Information about specific gender differences in expectancies would be useful when planning expectancy-based interventions. The following sections will first introduce the concept of alcohol expectancies and the relationship of expectancies to alcohol consumption. Past research on gender differences in alcohol expectancies will then be reviewed. In general, these studies yielded inconsistent results about the existence of gender differences. Reasons for these inconsistencies will be suggested based on a review of past expectancy research. Issues raised by critics and proponents of gender difference research will also be discussed. For example, the importance of context specific behavior

and confounds for gender (e.g., drinker level) are two variables that have not received much attention in the past but were considered in the design of this study.

*The Concept and Importance of Alcohol Expectancies.*

The focus of this study was on one area of gender differences: differences in alcohol expectancies. Expectancies are any process that “[prepares] the organism to respond to future circumstances” that are similar to situations encountered in the past (Goldman, 1999; Goldman, Del Boca, & Darkes, 1999, p. 205). Expectancies allow people to use information that they already have (either inborn or from past experiences) to understand and adapt more easily to new situations. Expectancies also provide information to a person about the consequences that may result from their actions in a particular situation.

The concept of expectancies has been applied to more specific areas of research such as alcohol. Beliefs that someone has about the effects of alcohol are referred to as “alcohol expectancies.” People process information about the effects of alcohol and situations in which alcohol is typically present. When a person enters into a situation in which alcohol is present, expectancies help him or her to determine an appropriate behavior (e.g., consuming no alcohol, a small amount of alcohol, or a large amount of alcohol) and the consequences that may then occur (e.g., I will become outgoing or relaxed or aggressive).

Alcohol expectancies play an important role in alcohol consumption as well as related aspects of drinking. Alcohol expectancies are a strong predictor of alcohol consumption (for reviews, see Goldman, 1994, Goldman, Del Boca, & Darkes, 1999) and may account for up to 50% or more of the variance in drinking (Goldman,



Greenbaum, & Darkes, 1997). Significant relationships between expectancies and alcohol consumption have been consistent and found using a number of different analytical methods including survey research, longitudinal studies, and true experiments (see Goldman, Darkes, & Del Boca, 1999 for review).

It is not necessary to have direct experience with alcohol to have alcohol expectancies. In fact, children develop beliefs about alcohol before they initiate alcohol consumption and these expectancies predict later drinking and problem drinking (Christiansen, Smith, Roehling, & Goldman, 1989; Dunn & Goldman, 1996; Zucker, Kincaid, Fitzgerald, & Bingham, 1996). Jones, Corbin, and Fromme's (2001) review of alcohol expectancy literature reported that alcohol expectancies "contribute both to the initiation and maintenance of drinking behavior" (p. 61). To summarize, research over the past few decades has shown that people possess certain beliefs about the effects of alcohol and that these beliefs play an important role in alcohol-related behavior.

*Research on Gender Differences in Alcohol Expectancies.*

Studies of gender differences in alcohol expectancies have been conducted but their results have been conflicting. Some studies (e.g., Carey, 1995; Kline, 1990; Mooney & Gilbert, 1999) report that they found no gender differences in expectancies. Other studies (e.g., Gustafson, 1993; Larimer, Anderson, Baer, & Marlatt, 2000; Makela & Mustonen, 2000) report differences in expectancies by gender; however, there is little consistency across studies regarding which expectancies show gender differences. It has been suggested that men hold stronger positive and weaker negative expectancies than do women (Brown, Goldman, Inn, & Anderson, 1980; Jones *et al*, 2001; Rohsenow, 1983); however, the research is not as clear-cut or consistent as this statement implies.

*Experimental studies.* Before the mid-1970s, few studies of the effects of alcohol had been conducted on women. At this time, researchers were beginning to recognize that women and men may differ with regard to their drinking behavior. In 1975, Beckman stressed that women should not be “ignored or lumped together with men” in either “treatment or treatment efforts” (p. 797). Previous studies had utilized men as their sample and generalized their results to women. Beckman (1975) intention was to highlight the idea that women might differ from men with regard to their alcohol-related behavior. Women should be represented in research samples and any differences between men and women should be recognized and explored.

During this same time period, researchers began to conduct experimental studies to investigate whether men and women differed in their beliefs about alcohol’s effects. These studies used variations on a placebo design to investigate differences in the behavior or cognitions of participants who believed that they were consuming alcohol. In studies using this methodology, some participants were told that they were consuming alcohol and actually received alcohol while others were told that they were consuming alcohol but received a nonalcoholic beverage (placebo condition). These researchers were interested in comparing the pharmacological effects of alcohol on behavior (alcohol condition) against the expectancy effects of alcohol on behavior (placebo condition).

Wilson and Lawson (1976) found that men displayed greater sexual arousal if they believed that they had consumed alcohol (than if they believed that they consumed a nonalcoholic drink), but were unable to replicate these findings in a similar study of women (Wilson & Lawson, 1978). Several years later, Caudill, Wilson, and Abrams (1987) found that men were more self-disclosing if they believed that they had consumed

alcohol while women were less self-disclosing. These studies were early reports that men and women differ with regard to their beliefs about alcohol's effects on their behavior and the expression of the behavior itself.

Abrams and Wilson conducted two studies in which they examined the effects of alcohol on social anxiety in men and women. The first study found that the belief that alcohol had been consumed led to a reduction in anxiety in men (Wilson & Abrams, 1977). The second study unexpectedly found the belief that alcohol had been consumed led to an *increase* in anxiety in women (Abrams & Wilson, 1979). These earlier studies provided some evidence that men and women report different effects of alcohol. In these studies, men reported greater sexual arousal and lower social anxiety while women reported higher social anxiety and no increase in sexual arousal.

Placebo studies suggest that beliefs about alcohol consumption may influence behavior when drinking; however, this type of research is difficult to conduct due to the small number of participants and expectancies that can be studied at one time. In addition, there are several issues regarding methodology such as creating a believable placebo and the artificiality of the laboratory setting for research on alcohol. Survey studies are a more common methodology to study beliefs that people have about consuming alcohol.

#### *Survey Studies of Gender Differences in Expectancies.*

*The Alcohol Expectancy Questionnaire (AEQ).* The majority of the expectancy work done by researchers has utilized some type of survey format to measure and compare expectancies. The questionnaire most frequently used by researchers is a version or a modified version of the Alcohol Expectancy Questionnaire (AEQ: Brown *et*

*al.*, 1980; Brown, Christiansen, & Goldman, 1987; AEQ – A, adolescent version: Christiansen, Goldman, & Inn, 1982). Several studies using the AEQ report no gender differences in the endorsement of alcohol expectancies by college students (Carey, 1995; Kline, 1990; Martin & Hoffman, 1993; Mooney & Gilbert, 1999).

Studies using measures other than the AEQ also report no significant mean gender differences on expectancy subscales. Southwick, Steele, Marlatt, and Lindell (1981) reported no gender differences during the development of their own measure of expectancies. Several years later, George and McAfee (1987) used Southwick *et al.*'s (1981) expectancy measure and their findings supported the earlier report of no gender differences. Several other studies, using a variety of measurement tools, report an absence of gender differences in expectancies (Levine, 1989; Williams, Connor, & Ricciardelli, 1998) and “reasons for drinking” (Carey & Correia, 1997), a questionnaire whose content is similar in nature to expectancies.

Studies that report gender differences in alcohol expectancies are reviewed in the following section and presented with regard to the six subscales of the AEQ (Brown *et al.*, 1980). This organization has been selected because the AEQ is the most popular measurement tools for examining expectancies. The six AEQ subscales and an example of an expectancy item found in each are: 1) Global Positive Expectancies (e.g., “Alcohol makes me more interesting”), 2) Sexual Enhancement (e.g., “After a few drinks, I am more sexually responsive”), 3) Physical and Social Pleasure (e.g., “Drinking makes me feel good”), 4) Increased Social Assertiveness (e.g., “Drinking gives me more confidence in myself”), 5) Relaxation and Tension Reduction (e.g., “Alcohol makes me worry less”), and 6) Arousal and Aggression (e.g., “After a few drinks it is easier to pick a fight”)

Subscales from other expectancy questionnaires display a great deal of content overlap with subscales on the AEQ. For example, Rohsenow's (1983) Alcohol Effects Questionnaire includes the six AEQ subscales along with two additional scales that measure negative expectancies ("Impairment" and "Lack of Concern for Actions"). Where possible, subscales that overlap the AEQ in context will be reported under the relevant AEQ subscale. It is important to note that the nine studies mentioned above reported no overall gender differences in alcohol expectancies and no subscale differences.

The majority of the studies on expectancies have been conducted on college students. It will be noted if a study included non-college adult populations in their samples. College student populations are frequently used in alcohol research. In addition to the size and convenience of collecting data from students, a large percentage of college students consume alcohol and they consume alcohol in large amounts. As a result, they are a population in which many aspects of alcohol consumption may be studied including consumption patterns, beliefs about alcohol, and consequences of alcohol use. Although the focus of studies on college students produces a wealth of information regarding this specific population, it limits the generalizability of findings to older or younger populations.

*Global Positive expectancies.* There have been inconsistent results with regard to gender differences on Global Positive expectancies: Mooney, Fromme, Kivlahan, & Marlatt (1987), Rohsenow (1983), and Gustafson (1993) found that men held a stronger expectancy of Global Positive changes than women. However, Brown *et al.*(1980) and

Williams and Wortley (1991) found the opposite result: women held a stronger expectancy of Global Positive changes than did men.

*Physical and Social Pleasure expectancies.* With regard to Physical and Social Pleasure expectancies, more studies suggest that men hold stronger expectancies than women (Abbey, Smith, & Scott, 1993; Bailly, Carman, & Forslund, 1991; Gustafson, 1993; Mooney *et al.*, 1987; Novack, Conrod, & Woicik, 2000; Rohsenow, 1983) than the reverse (Brown *et al.*, 1980).

*Social Assertiveness expectancies.* Findings of differences on Social Assertiveness expectancies displayed a similar pattern as beliefs in physical and social pleasure effects of alcohol: more studies found men reporting a stronger expectancy than women (Baldwin, Oie, & Young, 1993; Gustafson, 1993; Makela & Mustonen, 2000; Rohsenow, 1983; Sher, Wood, Wood, & Raskin, 1996) than the reverse (Larimer *et al.*, 2000).

*Relaxation and Tension Reduction expectancies.* More studies report stronger endorsement of Relaxation and Tension Reduction expectancies by men than women (Abbey *et al.*, 1993; Brown *et al.*, 1980; Rohsenow, 1983; Sher *et al.*, 1996). Two studies found that women reported a higher mean than did men - one that used the Dose-Dependent Alcohol Expectancy Questionnaire (Larimer *et al.*, 2000) and one that used the AEQ (Mooney *et al.*, 1987).

*Arousal and Aggression expectancies.* The endorsement of arousal and aggression expectancies offers the most evenly divided results of all the subscales. Three studies using the AEQ found stronger endorsement of Arousal and Aggression expectancies by women than by men (Edgar & Knight, 1994; Lundahl, Davis, Adesso, Berger, &

Milligan, 1992; Lundahl, Davis, Adesso, & Lukas, 1997). Three studies found the reverse finding: men reported stronger belief in arousal and aggression results from alcohol consumption than did women. These studies used a variety of measurement tools including the AEQ (Brown *et al.*, 1980), the Drinking Motives Scale (Bailly *et al.*, 1991), and the Expectancy Context Questionnaire (Levine, 1991).

One of the few studies utilizing an adult population examined expectancies for aggression following alcohol consumption. Johnson and Glassman (1999) used the Effects of Drinking Alcohol Scale (EODAS) to investigate differences between adult men and women of Puerto Rican and Irish-American descent. While mean endorsement of expectancies was not compared for significance by gender, the reported means suggest that men and women may have similarly endorsed aggression expectancies (Male Ms = 1.61 and 1.56; Female Ms = 1.59 and 1.35) and loss of control expectancies (Male Ms = 1.54 and 1.42; Female Ms = 1.70 and 1.26). This finding is consistent with studies that report no gender differences and inconsistent with the studies that report significant differences between men and women.

*Sexual Enhancement expectancies.* Findings on Sexual Enhancement expectancies have been the most consistent of all the AEQ subscales. Each study that reported a gender difference for sexual enhancement found heavier endorsement by males than by females (Brown *et al.*, 1980; Mooney *et al.*, 1987; Levine, 1991; Derman & Cooper, 1994). No studies reported that women had a higher mean on the subscale than did men although the nine studies mentioned earlier found no gender difference for Sexual Enhancement expectancies.

*Other expectancies.* There are several questionnaires in addition to the AEQ that measure expectancies. Although some subscales are similar in content to the AEQ, others are not easily comparable to one of the six AEQ subscales. One example is the belief that consuming alcohol leads to impairment of functioning. Three studies that report gender differences for these beliefs found similar results. Women tended to endorse a stronger belief that alcohol causes impairment than do men (Gustafson & Engstrom, 1991; Leigh, 1987; Rohsenow, 1983). In addition, Leigh (1987) found that men expected more nastiness than did women following the consumption of alcohol while Novack *et al.* (2000) found that women expressed a stronger belief that alcohol consumption results in decreased depression.

*Other variables.* There has been much inconsistency among studies reporting gender differences in alcohol expectancies. Some researchers have sought to clarify the picture by including possible moderating variables in their analyses such as age or where the participants live (on-campus versus off-campus housing). The results of these studies tend to be complex and endorsement of expectancies results from the interaction of gender and other variables such as age and living situation. These studies suggest the complicated nature of expectancies. More studies reviewed above report that men endorse expectancies more strongly than the reverse. The studies reviewed next suggest that within a single sample, presence and direction of gender differences in expectancies depend on more than just gender.

Wiers, Hoogeveen, Sergeant, and Gunning (1997) created their own expectancy questionnaire to examine expectancies based on age and gender. Their measure combined items from several measures including the AEQ to create 4 subscales: positive



and negative expectancies for a low dose of alcohol and positive and negative expectancies for a high dose of alcohol. This questionnaire was then administered to three groups of students (11-15 year olds, 16-18 year olds, and university-aged men and women). The presence of gender differences depended on age of the participants. There were no gender differences for expectancies when male and female participants in the youngest and oldest age groups were compared. However, students in the middle age group displayed gender differences on 3 out of 4 expectancy subscales. Boys in this group reported stronger endorsement than did girls of positive effects (e.g., sexual enhancement) and negative effects (e.g., negative mood) resulting from a low dose of alcohol and positive effects resulting from a high dose of alcohol (e.g., enjoying parties). In this study, age impacted gender differences regarding beliefs about the effects of alcohol.

Lundahl *et al.*(1997) examined the impact of age and family history of alcohol use on gender differences in alcohol expectancies by administering the AEQ to college-aged men and women. They found that women over the age of 20 reported lower Global Positive expectancy beliefs than did women under the age of 20 and men in both age groups. In addition, they reported that women under the age of 20 who had a family history positive for alcohol abuse held stronger Physical and Social Pleasure expectancies than women or men in all other groups. Similar to the finding of Wiers *et al.*(1997), age played an important role in whether gender differences in expectancies were significant. The additional factor of family history of alcohol abuse also led to significant differences in alcohol expectancy endorsement by gender.

Ricciardelli and Williams (1997) examined the alcohol expectancies of college students using a short version of the Alcohol Expectancy Scale (Brown *et al.*, 1987). They examined the influence of both gender and current living environment (living alone off-campus, living with friends off campus, and living in dorms on-campus) on endorsement of expectancies. Women who lived alone or with friends reported higher expectancies of sexual enhancement and power than did men in similar living situations. Conversely, women who lived in dorms reported lower expectancies of sexual enhancement and power than men who lived in dorms. Finally, there was no gender difference in the endorsement of these expectancies between men and women who lived with their parents. Not only do individual studies conflict with regard to endorsement of specific expectancies such as sexual enhancement and power, but the picture becomes more complicated when additional variables are included. Studies that only consider gender report that men (or women) more strongly endorse an expectancy than women (or men). Studies that take other variables into consideration show a more complicated pattern. Within a single sample, men may report stronger endorsement than women, weaker endorsement than women, and no difference in endorsement if other variables are included in the analyses.

*Summary of the Previous Research on Expectancies.*

It is difficult to draw any conclusions about gender differences in expectancies based on prior research on this topic. No clear pattern of differences on specific or overall expectancies has been found - some studies have found no differences while others have reported significant differences between men's and women's expectancies. To make the picture more complicated, studies that have found differences are not consistent with

regard to specific expectancies that differ between men and women. Most studies have, in fact, reported no significant differences. Studies that have found differences have not been consistent. It is conceivable that when differences were found, they were a result of error or specific aspects of the sample used which would make it difficult to generalize results to other groups.

*Should We Continue to Study Gender Differences in Expectancies?*

Although the research on gender differences in expectancies presents an unclear and complicated picture, there are reasons to continue work in this area and to try to determine whether and where gender differences exist. One reason to continue research in this field relates to the exploration into using expectancies as part of intervention programs.

*Expectancy challenge interventions.* Researchers have recently begun to examine whether expectancies can be used in interventions targeted at problem drinkers. Research has found a reciprocal relationship between alcohol use and expectancies. For example, Smith, Goldman, Greenbaum, and Christiansen (1995) and found that, for adolescents, higher expectancies for the social effects of alcohol predicted alcohol use a year later which then predicted higher expectancy scores a year after that. In addition, Sher *et al.* (1996) found that decreases in drinking were related to decreases in expectancies. This research suggests that alcohol consumption influences alcohol expectancies and vice versa. Expectancy challenge programs are based on the premise that modifying expectancies may lead to changes in consumption. The goal of the expectancy challenge is to modify expectancies and subsequently reduce problematic levels of alcohol consumption.

Participants in the challenge programs discuss and examine their beliefs about alcohol compared to the pharmacological effects of alcohol. They learn about how expectancies work to influence behavior and learn how to recognize their own expectancies and the expectancies put forth by the media and society. Follow-up assessment of expectancies and alcohol consumption can then determine whether changes in these variables occurred following the expectancy challenge. Expectancy challenge programs have resulted in reduced levels of alcohol consumption among college students (Darkes & Goldman, 1993, 1998). Expectancy challenge represents a practical application of expectancy theory and is an important direction to be continued in future studies.

Although expectancy challenges have had some success in reducing drinking levels, questions have been raised regarding their effectiveness with women. In their reviews of expectancy challenges, both Borjesson and Dunn (2001) and Jones *et al.* (2001) suggest that challenge programs are more successful and consistent in decreasing alcohol consumption in heavy-drinking male participants than in female participants.

It has been suggested that expectancy challenges are more successful with men than with women because of gender differences in expectancies (Borjesson & Dunn, 2001). The expectancy challenge programs were created and initially tested on male participants. Expectancy information presented during the program was chosen based on the data gathered from men. Expectancies related to male drinking may be different from those related to female drinking. In general, specific expectancies may play a different role in drinking for men and women. Even if men and women endorse the same expectancies, each gender might place a different level of importance on each belief or

define the same expectancy in different ways. Either way, the end result could be that expectancy information that it is important to men could be different from the expectancy information that is important to women. Research on gender differences in expectancies has yielded conflicting results; therefore it is unclear whether expectancy challenges have different impacts on men and women as a result of gender differences in expectancies.

If women differ from men regarding their expectancies they may view the expectancy information presented during the challenge as less important or personally relevant to their own drinking. Thus the expectancy challenge would then have less of an impact on their behavior. This process is one possible explanation for why expectancy challenges tend to work better with men than women. Studies of expectancy challenges have not yet explored whether differences in the programs' efficacy by gender are due to gender differences in expectancies or other variables such as drinker level differences or differences in material and presentation of the material within individual challenge protocols.

If the outcomes of expectancy challenges relate to gender differences in expectancies, then one way to increase the impact of these programs on women would be to identify specific gender differences in expectancies. The general format of the challenge programs could be maintained while modifying specific content to reflect expectancies that are also important to women. If the content is adapted to reflect expectancies that are important to women in the same way that the original context is important to men, then women may also show the reduction in drinking that men have shown.

In order to tailor challenge programs by gender, the first step is to identify reliable differences in expectancies. The next few sections will suggest that examination of past research on expectancies and issues raised by gender difference researchers could help to guide research on gender differences in a way that would help to answer the question of whether or not gender differences exist. The most common reason given within studies to explain gender differences (socialization) will first be reviewed and then additional issues raised by the investigator's review of the past research will be discussed.

*Socialization as an Explanation for Gender Differences.*

No explanation has yet been put forth regarding the conflicting findings of gender difference research in the area of alcohol expectancies. The only explanations that have been offered for gender differences have been found in the introduction and discussion sections of single studies. Within individual studies, socialization is a frequently suggested explanation for findings of gender differences in alcohol expectancies (e.g., Borjesson & Dunn, 2001; Cooper, Russell, Skinner, Frone, & Mudar, 1992; Lo & Globetti, 2000). During the process of socialization, men and women are taught different lessons about alcohol by society. It has been suggested that drinking is a more normative activity for men as it is more strongly encouraged and included in a wider range of male activities (Bailly *et al.*, 1991; Engs and Hanson, 1990; Johnson & Glassman, 1999), that alcohol consumption carries more stigma for women than for men (Bongers, van de Goor, Van Oers, & Garretsen, 1998; Gomberg and Nirenberg, 1991; Leigh, 1995; Ricciardelli, Connor, Williams, & Young, 2001), and that negative consequences resulting from alcohol consumption is viewed more negatively for women than for men (McMahon, Jones, & O'Donnell, 1994). Wilsnack, Vogeltanz, Wilsnack, & Harris (2000)

summarized literature suggesting that the discrepancy between men's drinking and women's drinking is greater in societies where gender roles are most strictly defined with the least amount of overlap (e.g., Nigeria). As the traditional women's role becomes less of a focus in a particular society, women's drinking increases and becomes more similar in nature to the consumption of men.

There is some empirical evidence that male drinkers are expected to exhibit different behaviors than female drinkers. Instead of being asked to endorse expectancies for themselves, participants in these studies (e.g., Edgar & Knight, 1994; George & McAfee, 1987) are asked to endorse expectancies for "a male drinker" and "a female drinker." George and McAfee (1987) found that perceived alcohol effects differed by gender: female drinkers were expected to achieve less stimulation and less pleasure than a male drinker. Although studies have been inconsistent with regard to whether men or women more strongly endorse arousal and aggression expectancies for themselves, studies consistently find that male drinkers, but not female drinkers, are expected to become more aggressive following alcohol use (Abbey, McAuslan, Ross, & Zawacki, 1999; Crawford, 1984; Edgar & Knight, 1994). Conversely, female drinkers, but not male drinkers, are expected to be more sexually available and sexually enhanced (Abbey *et al.*, 1999; Edgar & Knight, 1994; George & McAfee, 1987). This finding contrasts with the fact that studies report either no gender difference in the endorsement of Sexual Enhancement expectancies or stronger endorsement by men than by women. People have certain beliefs about how alcohol affects men and women in general. These beliefs may be a result of socialization and may influence self-expectancies for alcohol consumption.

It is not clear whether or how the process of socialization impacts self-expectancies for alcohol.

Although socialization may account for specific differences in expectancies, it does not explain why differences are found in some studies but not in others, even when the same questionnaire is used in both studies. Reasons for the differences across studies have not been explored and no comprehensive review of gender difference in expectancies has been published at this time.

*Reasons why Gender Difference Research has been Conflicting.*

The articles reviewed earlier that examined gender differences in expectancies were examined closely to determine 1) whether there were any variables that differentiated between studies that found differences and the studies that did not report differences and 2) whether there were any variables that were not included in the studies that might be important. These variables were sought to help explain why the results have been so inconsistent and to provide a framework for the current study. Based on this review, four issues will be discussed in the following section: 1) sample size and power, 2) drinker level, 3) context, and 4) interpretation of expectancy words and phrases.

*Sample size and power.* It has been suggested that differences in behavior between men and women tend to be small in size. In her review of gender difference research, Eagly (1995) examined studies across a variety of psychological constructs. Her analysis suggested that a few gender differences might be described as having a large effect size (e.g., attitudes toward casual sexual intercourse, nurturing tendencies, accuracy of throwing a ball). However, gender differences in most areas of research reflect small to medium effect sizes (Eagly, 1995; Helgeson, 2002; Lott, 1996). The



effect size for gender differences in alcohol expectancies may also fall into the small to medium range.

Researchers have argued for the importance of studying gender differences despite small effect sizes. Eagly (1994, 1995) suggests that, although most gender difference effect sizes tend to be small to moderate, they are not smaller than those of other widely accepted psychological constructs (e.g., the affect of mood on helping behavior). Both James (1997) and Martell, Lane, and Emrich (1996) discuss the importance of translating statistics into practical terms. For example, Martell *et al.* (1996) conducted a computer simulation that demonstrated how a small gender bias (1%) in performance ratings at a company would lead to a much larger discrepancy in promotions (only 35% of highest level positions filled by women). These researchers argue that statistically significant differences that appear to be small may actually have large consequences for men and/or women when translated into real world situations.

Because the effect sizes of gender differences in general have been small to moderate, it would be reasonable to hypothesize that gender differences in alcohol expectancies would also be small to moderate. If this is true, then sample size could have an impact on whether significant results were found. When past studies that examined gender differences were reviewed (adult and college student samples), there was a difference in sample size between studies that reported gender differences and those that did not. Twelve studies of college students and adults that found differences had an average N of 369 ( $SD = 209$ ; range = 118-781) while nine studies that did not report differences had an average N of 259 ( $SD = 215$ ; range = 92-844). Although the studies

that found differences had a slightly larger average sample size, there were large standard deviations and the mean sample sizes did not differ significantly ( $t = 1.2, p = .241$ ).

When studies that included only college students (the majority of the studies) were examined separately, the discrepancy became larger: the average sample size for eleven studies that found differences was 332 ( $SD = 173$ , range = 118-627) as opposed to a mean sample size of 189 ( $SD = 71$ ; range = 92-316) for eight studies that did not report differences. When only studies that included college students were examined, there was a significant difference ( $t = 2.19, p < .05$ ) between the average sample size of studies that found differences and those that did not find differences.

In general, studies that found gender differences had a larger N, on average, than studies that did not report differences. This discrepancy in sample size suggests that gender differences may exist but that the effect size is small. Studies with smaller sample sizes may not have had enough power to detect these differences resulting in a Type II error. Instead of attributing their lack of findings as a power issue, it was instead reported that men and women did not differ with regard to expectancies.

The effect size for gender differences in general tend to be small and the review of research on gender differences in alcohol expectancies also suggests that the effect size for this construct is small to moderate. When conducting a study on gender differences, it is important to collect a large enough sample that power is adequate to detect differences should they exist. This study utilized power analysis to insure that enough participants were collected to yield adequate power for statistical analyses.

*Drinker level.* In addition to effect size, another obstacle to studying gender is that it is not a variable that can be randomly assigned to different groups: men make up

one group while women make up the other group. Because random assignment is impossible, characteristics that are differentially associated with one gender or the other may be easily confounded with gender. For example, gender may be associated with status (Helgeson, 2002; Ridgeway & Diekema, 1992). Status theories (e.g., Ridgeway & Diekema, 1992) suggest that men have a higher social status than women and studies that report differences between men and women have actually have found differences between people with higher status and people with lower status. Another example of a variable that can easily be confounded with gender is gender composition of the participant - experimenter dyad (Eagly, 1995). If both male and female participants interact with a single experimenter, differences attributed to gender may actual be differences in how people behave in same-sex as opposed to mixed-sex dyads.

In alcohol research, gender may be confounded with drinker level. Men are more likely than women to be heavy drinkers and this is a finding that is very consistent in the alcohol literature. In fact, it has been reported that a greater percentage of men consume alcohol (i.e., have a lower rate of abstention) (Dawson & Archer, 1992; Engs & Hanson, 1990), that men consume greater quantities of alcohol (Carey & Carreira, 1997; Dawson & Archer, 1992; Donovan, 1993; Ely, Hardy, Longford, & Wadsworth, 1999; Engs and Hanson, 1990; Ricciardelli *et al.*, 2001; Wilsnack *et al*, 2000), consume alcohol more frequently (Bongers *et al.*, 1998; Carrigan, Samoluk, & Stewart, 1998; Dawson & Archer, 1992; Engs and Hanson, 1990; Ricciardelli *et al*, 200; Wilsnack *et al*, 2000) and consume large amounts of alcohol more frequently (Abbey *et al*, 1993) than women .

It was difficult to determine the drinker levels and gender-specific drinker levels for specific studies on gender differences in alcohol expectancies. Researchers report

participant drinking levels in a variety of different ways (if drinking levels are reported at all) therefore it was difficult to compare drinking levels across studies. However, some studies that found differences classified a larger proportion of their participants as heavy drinkers. For example, Carey (1995) did not find gender differences in a sample (N = 140) where 16% of participants were reported to be “heavy drinkers.” On the other hand, Rohsenow (1983) did find gender differences in a sample (N = 150) where 50% of participants were labeled as “heavy drinkers.” Gender and drinker level could be confounded in these studies if men make up a larger proportion of the heavy drinkers while women make up a larger proportion of the lighter drinkers.

Few researchers control for drinker levels when examining gender differences or equate the number of men and women in their “light” and “heavy” drinking groups. However, without controlling for drinker level, it is difficult to determine whether drinker level has been confounded with gender in studies of gender differences. Only a few studies of gender differences report the percentage of each gender that is classified as “light” and “heavy” drinkers in their samples. In one study that found gender differences in expectancies (Williams & Wortley, 1991), men were 10 times more likely than women to report drinking 9 or more drinks per occasion (21.1% vs. 2.2%) while women were twice as likely as men to report that they drank fewer than 2 drinks per occasion (36.2% vs. 19.2%). A second study that found gender differences (Rohsenow, 1983) classified many more male participants (N = 60) than female participants (N = 16) as heavy drinkers. Conversely, many more female participants (N = 28) than male participants (N = 9) were classified as light drinkers. Without controlling for drinker level, studies reporting that men endorse expectancies more strongly than women (the more frequent

direction of gender differences) may have *actually* found that heavier drinkers endorse expectancies more strongly than do lighter drinkers.

When conducting research on gender differences in alcohol expectancies, it is important to pay attention to the role of drinker level in endorsement of expectancies. To avoid confounding drinker level and gender, drinker level can be included as a variable in analyses or as a covariate. Problems with including drinker level as a variable include determining whether gender-specific drinker levels should be used, determining the cut-off criteria for light and heavy drinkers, and acknowledging sample specific features of drinking. In the current study, drinker level was used as a covariate in the analyses of expectancies.

*Context of alcohol consumption.* Alcohol consumption occurs in many different locations and contexts. This feature of drinking has been recognized as important in the consumption patterns of men and women, but has not been emphasized in an in-depth manner within expectancy research. How context has been dealt with may help to explain conflicting results and provide a method for current and future studies.

Discussions about gender differences in general have emphasized the important role of context. Most behavior occurs within a social context and involves the interaction of that person with others (Archer, 1996a, 1996b; Hare-Mustin & Marecek, 1994) therefore discussions of gender need to recognize the context in which behavior occur (Deaux & LaFrance, 1998; Deaux & Major, 1987). It is difficult to discuss the behavior of men and women without attending to details of the circumstances in which that behavior occurs as well as other variables within the context (e.g., sex of the other people). Psychological researchers are becoming increasingly aware of these ideas. For

example, Rosnow and Rosenthal (1989) suggested that “there is a growing awareness in psychology that just about everything under the sun is context dependent one way or another” (p. 1280) while Lott (1996) points out that “behavior always takes place in a context and is influenced by the situation or circumstances” (p. 155). In addition, certain situations (such as a bar) may lead to men and women behaving differently in a way that would not occur in other settings (Deaux & LaFrance, 1998). As with other areas of gender research, alcohol expectancies may be influenced by the drinking context of a man or woman.

Within expectancy questionnaires, context has been dealt with in several different ways. One set of studies does not incorporate context in their designs and context is therefore is not controlled. Participants are free to imagine any type of drinking situation when answering questions. These situations may vary from drinking alone to having a few drinks with dinner to drinking at a club or bar. Expectancies may be very different depending on the context in which the person is; however, this methodology makes it impossible to determine what type of context was used to answer the expectancy items.

The Alcohol Effects Scale (AES; Southwick *et al*, 1982) and the Effects of Drinking Alcohol Scale (EDA; Critchlow, 1987; Leigh, 1987) are two examples of scales that do not explicitly include context of alcohol consumption within their items. The AES asks the person to describe how he or she would be affected by a “moderate” amount of alcohol using a pair of adjectives markers at either end of a continuum. Examples of the adjective pairs include: “happy-sad” and “bored-interested.” No instruction is provided for where the person is when he/she is drinking a “moderate” amount of alcohol.

Participants are free to imagine themselves in a wide range of situation and interacting with a wide range of people.

The EDA queries about expectancies in a similar manner. In the EDA, a person is asked to respond to items as if they drank “enough alcohol to be under the influence.” The participant then responds to a series of consequences (e.g., feel sleepy, get aggressive) endorsing whether it is unlikely or likely that this consequence would occur after consuming alcohol. Just like the AES, participants are free to imagine any situation when responding to these items.

Although there may be overlap with regard to the contexts that people use to respond to items, these questionnaires does not provide a way to determine the level of commonality. One participant might imagine that he/she is in a bar with a large group of friends while the next participant imagines that he/she is in a restaurant on a first date. There is also no guarantee that one participant is using the same situation to respond to all items. A participant might use memories of drinking in bars for one item and memories of drinking with family members for the very next item. With regard to gender, it is possible that men are more likely to think about one type of context while women are more likely to think about a different context when answering questions related to alcohol.

In a second set of studies, context is included within specific items on an expectancy questionnaire. This methodology more closely links beliefs about alcohol and context of alcohol consumption. One example of this type of questionnaire is the Alcohol Expectancy Questionnaire (AEQ) (Brown *et al*, 1980) . The AEQ includes context

within specific items such as “Drinking adds a certain warmth to *social occasions*” or “I am a better *lover* after a few drinks.”

When context is incorporated into specific items on an expectancy questionnaire, the implicit assumption is that expectancy and context cannot be separated. The researcher wants the participant to report whether alcohol makes him or her more sociable *within the context of a social occasion* as opposed to any other location in which the person could be drinking (e.g., drinking alone). This type of item controls for the context so that all participants are referring to a similar situation when they decide on their response. Participants are expected to think about social events when answering this item (as opposed to drinking alone). However, even the context of “a social occasion” leaves room for individual interpretation. In these questionnaires, items that include context tend to be combined with items that do not provide contextual clues into expectancy subscales. Any information specific to the item and that context may be lost when it is combined with noncontext items.

A third set of studies is even more specific about context. These studies include a “context of drinking” questionnaire in addition to an “expectancy questionnaire.” Most of these studies consider expectancies and context to be two variables that may predict alcohol consumption, but do not directly compare the two variables. For example, Holyfield, Ducharme, & Martin (1995) examined the ability of three drinking contexts (at home, socializing with other people, and drinking at restaurants or bars) and three beliefs about drinking (drinking as a way to have fun, drinking as a social lubricant, and drinking to modify affect) to predict alcohol consumption and dependence. All three contexts and one of the beliefs (the belief that alcohol can modify affect) predicted general level of



alcohol consumption. However, the interaction between context and expectancies was not studied. Thombs, Beck, and Pleace (1993) conducted a similar study by examining how context vs. expectancies predicted consumption of alcohol.

One issue regarding this type of study is how context is measured and defined. In both Holyfield *et al.*'s (1995) and Thombs *et al.*'s (1993) study, there seemed to be a great deal of overlap between the two sets of questions. For example, Thombs *et al.* (1993) asked about drinking in the *context* of "feeling better about myself" vs. the *belief* that drinking alcohol makes the person more outgoing or happier. When the definition of "social context" is considered this confound becomes clearer. Beck and Summons (1987) defined "social context" as having two parts: 1) environmental or situational factors of the drinking situation, and 2) "specific motivational factors for why people consume alcohol" (p. 183). Examples of this second aspect of context were aspects of drinking that would be found on many expectancies questionnaires (e.g., "to be sociable" and "to cope with stress"). Thombs, Beck, and Mahoney (1993) repeated this point by defining social context as *where and when* people drink plus *the reasons why* people drink. Using this definition of "social context," it is difficult to distinguish between context of drinking and expectancies for drinking. Although these measures seek to more fully include context in the study of expectancies, they also include much overlap with expectancy measures and leave ambiguity in the interpretation of the context.

The fourth and final set of studies provides a single drinking context and asking participants to respond to items as if they were in that situation. This type of investigation is the most infrequent method but is the strongest control of context. Levine (1989, 1991) created the Expectancy Context Questionnaire (ECQ) with the explicitly to

examine fluctuations in expectancies due to context. In Levine's studies (1989, 1991), participants were asked to imagine that they were consuming alcohol in a number of different locations presented in vignette form. These locations included a bar setting, at a restaurant with a date, and at home studying for an anxiety-provoking exam. After participants imagined a scenario, they were asked to complete an expectancy measure for that one particular context. Participants completed the same expectancy measure after each context. The goal of the ECQ was to compare expectancies within and across different drinking contexts. Levine (1989, 1991) reported that endorsement of expectancies did differ depending on which context had been presented.

Few studies have used the ECQ to explore differences in expectancies by context. MacLatchy-Gaudet and Stewart (2001) used three of the ECQ scenarios to explore contextual differences in expectancies held by college-aged women. The scenarios were a social context (a bar), a sexual context (date leading to possible sexual encounter), and a tension context (studying for an exam). As hypothesized, differences were found in expectancies by context. For example, positive expectancies were strongest in the sexual context and weakest in the tension context. Arousal expectancies were also strongest in the sexual context; however, they were weakest in the social context. Expectancies of relaxation and personality transformation did not differ across context.

Context has been included to varying degrees in expectancies research. Some questionnaires do not include context of drinking at all while others control context by providing participants with an explicit drinking situation. The conflicting results regarding gender differences in expectancies may be due in part to the lack of contextual control present in most of the previous studies. This study examined how gender

differences on expectancies differed based on the presence or absence of an explicit drinking context.

*Interpretation of items.* A final issue raised by past research on gender differences has to do with the interpretation of expectancy items. Many expectancy items use words or phrases that may be interpreted in different ways. For example, many questionnaires ask participants to report whether alcohol makes them “outgoing.” This word may have a number of different interpretations. Participants might state that they become “more outgoing” meaning that they talk more in general or talk more to people they do not know or talk more to members of the opposite sex. Their definition may not have to do with talking at all – some people might define “outgoing” in relation to dancing or flirting or just feeling more comfortable in a situation. Most questionnaires ask participants to agree or disagree with expectancy statements. They do not ask questions about what the expectancy may mean to a particular person.

One way to investigate the meaning of expectancy words is to actually ask participants what they mean when they use certain words. This task can be studied in depth during interviews or focus groups while paying attention to the different ways men and women define expectancy words. This task is more difficult to translate into a survey format for large groups; however, it can be achieved by translating information from interview and focus groups into more specific expectancy items that follow a questionnaire format.

A second way that researchers can investigate the meaning of expectancy words is to ask participants to define words through evaluations such as a positive – negative rating scale (e.g., Des Rosiers, Noll, & Goldman, 2002, see below). Many studies that ask

participants to evaluate expectancies combine the endorsement and evaluation information into a summary score (e.g., Bauman, Fisher, Bryan, & Chenoweth, 1985; Critchlow, 1987) but do not consider the evaluative information separately. When McCarty, Morrison, & Mills (1983) examined differences in evaluation of expectancies by drinker type, they found that heavier drinkers rated all expectancies as more positive than did lighter drinkers. Gender was not considered in their analyses. Although more recent work considers how endorsement compares to evaluation for the prediction of alcohol consumption (Jones & McMahon, 1996), examination of how groups differ when evaluating items has not been considered extensively.

Evaluation of expectancies would provide some additional information about the similar or different ways that male and female participants interpret the effects of alcohol. Des Rosiers *et al.* (2002) asked 222 college students to respond to 26 common expectancy terms using a scale that ranged from “completely negative” to “completely positive.” Differences in the evaluation for the term “loose” by gender were found: men considered “loose” to be a *positive* effect while women considered “loose” to be a *negative* effect of alcohol. Some differences in evaluation by gender were also found for the words “social” and “relaxed.” These findings suggest that some effects of alcohol have different meanings to men and women.

When expectancy questionnaires ask about general effects of alcohol (e.g., “outgoing”) or ask only for endorsement of expectancies, they may lose useful information. Even if no gender difference results from endorsement of expectancies, men and women may differ with regard to their evaluation or definition of expectancies. Paying attention to possible gender differences in the meaning or interpretation of

expectancy words could be useful to clarify the current picture of gender differences. The current study requested participants to both endorse expectancy items that were developed to be more specific than most previous items and to evaluate expectancy items on a positive-negative scale.

*Purpose of and Hypotheses for the Current Study.*

*Context.* The purpose of the current study was to use the information gained from the review of past research to guide a study of gender differences in expectancies. It was hypothesized that one reason for the inconsistency of past research is that these studies did not control context of their expectancy items. Presenting items without a drinking context may obscure results because it is impossible to determine whether participants were using similar scenarios to respond to the items. This study compared endorsement of expectancies when a context (a bar setting) was specified in detail and when it was not specified.

*Interpretation of items.* A second reason that results have been conflicting may be the general nature of expectancy words and phrases. Expectancy words may be interpreted different ways depending on context; however, endorsement of the items on traditional measures will not reflect differences in evaluation or definition. To determine whether men and women differ with regard to expectancy meaning, expectancy items were created for this study that were specific for a certain drinking context (a bar setting). Responses on these expectancies were compared to responses on more general expectancy items. In addition, men and women were asked to evaluate expectancies on a positive – negative scale and to define two of the expectancy phrases (“hooking up” and

“attention”). These tasks provided additional information regarding any gender differences in the meaning that expectancies.

*Bars as drinking context.* To create “specific” expectancies, a drinking context was first selected. A bar setting was chosen as the focus of this study. Bars are social locations in which many college students consume alcohol. Several studies (Harford, 1983; Harford, Wechsler, & Rohman, 1983; Wechsler & Rohman, 1981) have reported that social locations such as bars are the most common location for drinking for college-aged men and women. In addition to being common places for students to go to consume alcohol, bar settings are also places where a large quantity of alcohol might be consumed. The availability of alcohol (e.g., pitchers) and low price (e.g., drink specials) provides patrons with easy access to large amounts of alcohol.

Another reason that a bar was chosen was the social nature of bars. Social reasons or locations for drinking have been found to be important predictors of alcohol consumption. Because of the large number of people at bars, there is a high probability that people will interact with both friends and strangers. These interactions may be positive or negative. People go to bars to be with a large group of people and to be social and have fun. However, negative consequences can occur when interacting with many other people and consuming alcohol such as drunk driving, sexual assaults, and fights. For example, female bar patrons in focus groups reported many negative consequences of their drinking in bars including verbal, physical, and sexual victimization (Parks, Miller, Collins, & Zetes-Zanatta, 1998). Alcohol has been found to play a role in the severity of negative consequences that may occur in bars. For example, Graham & Wells (2001) found that more severe aggression in bars was associated with higher levels of

intoxication than less severe fights. While Parks and Zetes-Zanatta (1999) found that a more severe history of sexual victimization for women was related to increased frequency of drinking in bars.

*Reasons why men and women drink in bars.* Once the context for this study was selected, specific items about expectancies on which men and women seemed to differ were developed. To create these items, bar-specific research was reviewed and two pilot studies were conducted. Studies that focus on reasons for drinking in a specific location, especially quantitative studies, are rare. Only a few studies have focused on bar settings specifically. Several of these studies investigated the reasons why men and women go to bars. Strouse (1987) asked bar patrons (primarily college students) about their reasons for going to bars to investigate this question. Over half of the participants (51%) reported that they went to bars to “socialize with friends” while 7% reported that they went to meet a sexual partner. However, when asked where they would go to meet a sexual partner, a bar was the first or second location mentioned by 67% of the participants. For these students, a bar location seemed to be important both for spending time with friends and for meeting new people with whom sexual encounters may occur.

Gender differences were found with regard to some reasons for going to bars (Strouse, 1987). Male participants were more likely than were female participants to report that they went to bars “to drink” and “to meet a sexual partner.” More women than men reported that they went to bars to “see friends” and to “meet people” while fewer reported that they went with the intention of having “physical sex” or “picking up” someone. Strouse (1987) reported that, overall, his participants went to bars to “escape boredom and loneliness, to relax and have fun, to socialize with friends, and possibly to

meet a heterosexual partner” and that alcohol was a “catalyst to help make these things happen.” Bars seem to be a place where men and women go to socialize and meet new people; however, there may be a gender difference with regard to seeking a new sexual partner while at a bar.

Two more recent studies (Parks *et al*, 1998; Parks & Scheidt, 2000) utilized focus groups to examine why men and women drink in bars. Parks *et al.*(1998) conducted focus groups with adult women while Parks and Scheidt (2000) conducted focus groups with adult men about reasons why they consume alcohol in bars. The researchers reported several themes that were consistent between the two groups. Both men and women reported going to bars to socialize (in general and with members of the opposite sex) and as a diversion from the stress of their daily lives. In addition, women reported going to bars because they found “validation” in dressing up and receiving sexual attention from male bar patrons. These studies are consistent with Strouse’s (1987) earlier report that men and women go to bars to be social. Another gender difference was suggested with regard to women going to bars because of the sexual attention that they receive from men.

Although studies about reasons for drinking in bars are few in number, these studies (Parks *et al*, 1998; Parks & Scheidt, 2000; Strouse, 1987) are important because they suggest reasons for going to bars that men and women have in common (socializing, release from stress of lives) and other reasons that men and women may differ on (receiving attention, seeking a sexual partner). However, these studies did not explicitly consider expectancies for alcohol consumption within a bar context.



The studies reviewed above were used as a starting point from which “specific” expectancy items could be developed for the present study. The themes of sexual activity and receiving attention were further developed into expectancy items through two pilot studies (described in more detail in the methods section). Items were created or taken from the AEQ regarding expectancy themes that were common to men and women (i.e., social and tension reduction themes). In this study, four expectancy item groups were created: two “general” expectancy item groups (Social expectancies and Tension Reduction expectancies) and two “specific” expectancy item groups (Sexual Activity expectancies and Attention expectancies). Context was included as an independent variable in the analyses: half of the subjects were provided with a bar context while the other half were not.

*Hypotheses for endorsement of expectancies.* It was hypothesized that there would be an interaction between context and gender in the endorsement of expectancies. When context was controlled (i.e., participants imagine themselves in a bar scene), it was expected that men and women would not differ significantly in their responses to “general” expectancies but would differ significantly in their responses to “specific” expectancies. It was further hypothesized that men and women would not differ significantly on either “general” or “specific” expectancies when context was not controlled. When the items were presented without a context, as they are in most expectancy questionnaires, it was expected that participants would think about a large number of different drinking contexts as they responded to the items. As a result of this variability in context, reliable gender differences on expectancy items would be washed out and men and women would appear to have similar expectancies for alcohol

consumption. Because drinker level may be confounded with gender, drinker level was included as a covariate in these analyses.

*Summary of main analysis.* Based on previous research and pilot testing, it was predicted that there would be a significant gender by condition interaction for the endorsement of expectancy item groups. It was expected that gender differences would only appear when participants were asked to imagine themselves in a bar context and were asked to respond to expectancies that were specific to that context.

*Hypothesis 1:* When context was specified (i.e., participants were asked to imagine themselves to be in a bar situation), men and women were expected to differ significantly with regard to their endorsement of “specific” expectancies. It was expected that men would endorse Sexual Activity expectancies more strongly than would women while women would endorse Attention expectancies more strongly than men.

*Hypothesis 2:* When context was not specified, no significant gender differences were expected on mean endorsement of the two “specific” expectancy item groups.

*Hypothesis 3:* No gender differences were expected to emerge in the endorsement of Social expectancies or Tension Reduction expectancies. It was expected that men and women would equally endorse these effects in both conditions (Context and No Context).

*Exploratory analyses.* Because little work has been done regarding bar-specific expectancies or gender differences in such expectancies, a number of exploratory analyses were conducted with the purpose of providing additional information.

*Endorsement of expectancies by item.* In the main analyses, gender and context differences were examined for the four expectancy item groups. However, significant differences (or nonsignificant differences) could be driven by just a few items within an

item group. Exploratory analyses were run to examine whether participants differed significantly on all items within an item group or just on certain items. Because these analyses were considered exploratory and did not have basis in past research, specific hypotheses regarding the pattern of results were not put forth.

*Evaluation of expectancies by item.* Separate from the endorsement of expectancies, men and women may differ on their evaluation of such effects of alcohol. After participants endorsed the measure of expectancies, they were asked to evaluate each expectancy item on a positive-negative scale. Participants who received a context for the endorsement of expectancies were asked to continue to imagine the scene as they completed the measure of evaluation. Participants who did not receive the drinking context again received no instructions regarding location of alcohol consumption. The pattern of evaluation may be similar to the pattern of endorsement; however, there was no past research on which to base specific hypotheses. Therefore, the relationship of context and gender to evaluation of expectancies was explored, but no specific hypotheses were set forth.

*Sensation seeking.* The definition of sensation seeking is “the seeking of varied, novel, complex, and intense sensations and experiences and the willingness to take physical, social, legal, and financial risks for the sake of such experience” (Zuckerman, 1994, p. 27). Sensation seeking has been found to relate to alcohol consumption and more varied sexual activity (Zuckerman, 1994; Zuckerman & Kuhlman, 2000). Participants who are higher on the personality variable of disinhibition may be more likely to endorse expectancies related to sexual interest or activity (Sexual Activity and

Attention expectancies). The impact of sensation seeking on endorsement and evaluation of expectancies was explored through additional analyses.

*Interpretation of expectancy items.* It was hypothesized that men and women would have different interpretation of specific terms, “hooking up” and “attention,” within the context of the expectancy items. Based on a prior study (Strouse, 1987) that suggested that men are more blunt and explicit when using sexual vocabulary, it was considered possible that men would be more likely to include more explicit behavior in their definition of expectancy terms (e.g. oral sex or sexual intercourse); however, these analyses were again considered to be mostly exploratory.

## Method

### *Participants*

Participants were 846 undergraduate students recruited from undergraduate courses at the University of South Florida. Students from all majors and all drinker types (including abstainers) were able to participate in the study. Students recruited from psychology courses were offered 2 extra credit points (if accepted in their classes) while students recruited from outside of the psychology department were offered the opportunity to win a cash lottery prize in return for their participation. Participants completed the study in groups and in classroom settings.

### *Materials and Measures*

*Context of alcohol consumption.* A description of a bar situation was read out loud to participants in the Context condition. Verbal imagery for context presentation was chosen due to the moderate level of flexibility that it provides to participants. The verbal description of the situation provided enough detail that all participants could imagine similar situations; however, specific aspects of the situation were left vague so participants could imagine details that made the situation relevant to their own lives. Although bringing participants into a room decorated like a bar was considered for a stronger contextual prime, that type of setting could have limited how personally relevant the participants considered the situation. For example, they could have found the music, decorations, or people in the “bar” to be very different from situations in which they

regularly participate. As a result, the setting would have taken away from a participant's ability to respond to the items as if they were in that situation.

To create the bar context, a vignette describing a bar situation from the Expectancy Context Questionnaire (ECQ; Levine, 1989, 1991) was modified and presented to 130 college students as part of a pilot study. Participants were asked to report on the aspects of the bar that seemed to be realistic and unrealistic in an open-ended format. Modifications to the bar situation were made based on their feedback.

In the current study, participants in the "context" condition were asked to listen to a situation in which they were entering a bar to meet a group of friends. The situation described a social situation in which people were interacting and alcohol was being consumed. To encourage the participants to imagine themselves as drinking in the situation, the paragraph ended with a friend asking what they would like from the bar. Details of the situation that were intentionally left vague included the gender and ethnicity of friends and type of music playing. See Appendix A for the text of the bar scenario.

*Measure of bar-related expectancies.* All participants received an identical 20-item measure of bar-specific alcohol expectancies (Appendix B). Instructions for completing the measure differed slightly depending on whether participants received instructions regarding context. Participants in the "context" condition were asked to imagine themselves in a bar situation as they respond to the alcohol expectancy measure (Appendix C). Participants in the "no context" condition received no instructions regarding context (Appendix D). The response format was a 6-point Likert scale ranging from Strongly Disagree (0) to Strongly Agree (5).

Ten of the items were bar-specific expectancy items created and modified by the investigator from two pilot studies. In the first pilot study, the principal investigator conducted seven focus groups with a total of 47 undergraduate men and women. The purpose of the groups was to gather information about alcohol consumption in bar situations. Focus groups varied in gender composition and included all-female, all-male, and coed groups. Participants were asked to discuss their experiences at bars and their expectancies for consuming alcohol in bars. They were encouraged to be as specific as possible and were asked to explain ambiguous or vague terms (e.g., “outgoing”) as often as possible. Group sessions were transcribed and then analyzed for themes. For example, men were more likely to discuss going to bars to “hook-up” or share a sexual experience with a woman while women were more likely to discuss receiving attention from men when they went to bars. Themes from the focus groups and from research on reasons why men and women drink in bars (reviewed in the introduction) were used to develop bar-specific expectancy items.

The investigator conducted a second pilot study to refine the items created from the focus groups. One hundred and thirty undergraduate students completed a questionnaire that included a bar context followed by 34 bar-specific expectancy items. Ten items (two groups of 5 items) were retained based on the results of the pilot study. An item was retained if a significant gender difference was found for the mean endorsement of that item and the wording of the item was not redundant to other items. The items went through further refinement to insure that the wordings of the items were gender-neutral. Graduate and undergraduate raters were asked to report whether the item was biased toward one gender or the other. For example, “alcohol makes me feel

comfortable wearing a short skirt” was given as an example of an item that would be biased toward women. The raters were in agreement that none of the final 10 items were biased toward men or women.

The ten expectancy items retained for this study were classified into two item groups: 1) Sexual Activity expectancies and 2) Attention expectancies. The Sexual Activity expectancies (5 items) related to expectancies regarding sexual activity associated with drinking (e.g., “Having a few drinks of alcohol makes it more likely that I will share an exciting sexual experience with someone that night.”) and Attention expectancies (5 items) related to attention received from others while drinking (“When I am drinking alcohol, I feel good about the way that people notice me.”). For the bar-going participants, the internal consistency of the Sexual Activity expectancy items was .87 and the internal consistency of the Attention expectancy items was .81. These items made up 10 of the 20 expectancy items used in this study.

Ten additional items were taken from the Alcohol Expectancy Questionnaire (AEQ; Brown *et al*, 1980) or created by the investigator and related to the social and tension reduction aspects of alcohol consumption (e.g., “After a few drinks of alcohol, I am more outgoing.”). Five items measured Social expectancies and five items measured Tension Reduction expectancies. These ten items were interspersed among the 10 Sexual Activity and Attention items. For the bar-going participants, the internal consistency of the Social expectancy items was .85 and the internal consistency of the Tension Reduction expectancy items was .82. See Appendix B for items separated into the four item groups and Appendices C and D for items in their order of presentation.



*Evaluation of expectancies.* Participants were asked to complete the 20-item measure of expectancies a second time. The second set of 20 items was identical to the first set; however, the response format was changed. In the first part of the study, participants were asked to rate their level of agreement with each item. The second time, participants were asked to evaluate each item based on how positively or negatively they view the outcome or behavior that occurs in each item. The response format was a 6-point scale ranging from “Completely Negative” (0) to “Completely Positive” (5).

Instructions for this measure were slightly different to reflect whether participants received instructions about context. Participants in the “context” condition were asked to continue to imagine the bar scene while they answer the items (Appendix E). Participants in the “no context” condition received no instructions regarding context of drinking (Appendix F).

When bar-going participants were asked to evaluate the expectancies, the internal consistencies for the item groups were all high: Sexual Activity expectancies = .90, Attention expectancies = .87, Social expectancies = .88, and Tension Reduction expectancies = .88.

*Context used for expectancy items (Appendix G).* Participants in both conditions were presented with the set of 20 expectancy items for a third (and final) time. For each item, participants were asked to report what type of drinking context they used to respond to the item at the beginning of the study. The response format was a list of 10 drinking contexts including bars/clubs, parties, and restaurants. Participants were asked to indicate one location for each of the expectancy items.

*Zuckerman-Kuhlman Personality Questionnaire – Sensation Seeking subscale (Appendix H).* All participants were asked to complete the 11-item Sensation Seeking subscale of the Zuckerman-Kuhlman Personality Questionnaire (Zuckerman, Kuhlman, Joireman, Teta, & Kraft, 1993) to determine the relationship between the characteristic of experience seeking and endorsement of expectancy item groups. Items on this measure do not explicitly mention either alcohol use or sexual activity. Participants were asked to determine whether each statement was descriptive of them and to endorse either a “true” or “false” response option. Responses were scored so that 1 point was given to the higher sensation seeking response and 0 points were given to the lower sensation seeking response. The 11 items were summed to create a “Total Sensation Seeking” score for analyses. The internal consistency of the subscale has reported to be good (.77 and .82) and the subscale is significantly correlated with other measures of impulsivity and sensation seeking (Zuckerman *et al.*, 1993). In the current sample of bar-going participants, the internal consistency of the items was .68, which was slightly lower than had been previously reported.

*Demographic information (Appendix I).* All participants were asked to provide demographic information including age, gender, ethnicity, and sexual orientation. In addition, participants were asked to describe their current relationship status (one item) and their current level of sexual activity (two items). Specifically, participants were asked to report the number of partners with whom they have engaged in sexual intercourse over the past 12 months and to report how often they engage in sexual activity with steady vs. not steady partners.

*Pattern of alcohol use (Appendix I).* Participants were asked to report the frequency and quantity of their typical alcohol use as well as the frequency they become drunk from alcohol. This alcohol items were used as covariates for the principle analyses.

*Frequency of alcohol consumption by location (Appendix J).* To gather information about drinking patterns, participants were asked how often they drink in eleven locations. The list of locations included the contextual situation (i.e., a bar or club). The response format was a 10-point Likert scale. Participants were able to respond with a “0” if they did not drink alcohol and a “1” if they consumed alcohol but never in the location listed. The remaining responses ranged from “I drink in this location once a year or less” (2) to “I drink in this location 5, 6, or 7 days a week” (9).

A list of locations was created by the investigator and presented to the 47 focus group participants (described earlier). Participants were encouraged to add locations missing from the list and these locations (e.g., “while camping”) were added to create the final version of the scale. Responses to these items were used to determine the frequency that participants drink in bar situations. Participants who reported that they drank in bars at least once a month were included in the bar-going sample and used in the majority of analyses.

*Frequency of alcohol consumption in bars or clubs (Appendix K).* Participants were asked to report the proportion of time that they consume alcohol when they go to bars or clubs on one item. Response options ranged from “0% of the time (I never drink alcohol when I go to a bar or club)” to “100% of the time (I consume alcohol every time I go to a bar or club).” Participants were also asked to report the average quantity of alcohol that they consume when they go to bars / clubs and consume alcohol.

*Definition of expectancy terms (Appendix L).* All participants were asked to respond to a series of questions asking them to define two terms from the expectancy items. The terms that participants were asked to define were “attention” and “hook up.” The two terms were chosen as exemplars of the two “specific” expectancy item groups (Attention expectancies and Sexual Activity expectancies). Participants viewed a list of behaviors (e.g., “kissing,” “sexual intercourse,” “hearing verbal comments”) and were asked to report on a “yes” – “no” scale whether each behavior was included in their definition of the word (when considered in the expectancy item).

*Facts about the context (Appendix M).* Participants who completed the “context” condition were asked a three questions about the content of the bar situation description. Participants were asked what day and time the situation took place, whether there was a dance floor in the bar, and where their friends were located in the bar.

*Realism of the context (Appendix N).* Participants who completed the “context” condition were asked three questions about the realism and usefulness of the bar context. Participants were asked first to rate the realism of the situation on a 3-point Likert scale ranging from “not at all realistic” (0) to “very realistic” (2). Next, they were asked to report how often they go to bars similar to the one in the situation on a 3-point Likert scale ranging from “No, The bars I go to are very different from this one” (1) to “Yes, I often go to bars that are similar to this one” (3). Participants also had the option of reporting that they “do not go to bars” (0). Finally, they were asked to report how much they used the situation when responding to the expectancy items on a 4-point scale ranging from “I *didn't* use the situation *at all* when I was answering the items” (0) to “I used the situation *very much* when I was answering the items” (3).

*Procedure.*

Participants were recruited from undergraduate courses at the University of South Florida. The investigator explained that the purpose of the study was to gather information about alcohol consumption by college students. Participants were informed that they were not required to drink to participate in this study. They were reminded of the compensation for their participation: either extra credit points or a cash lottery entry. Participants who were being entered into the lottery were informed that one person would be selected at the end of the study and the winner would receive \$10 cash at that time.

Before they agreed to take part in the study, potential participants were asked to carefully read and then sign the Informed Consent form (Appendix O). The Informed Consent form provided information regarding confidentiality, benefits and risks of participating in research, and storage of data. After they signed the consent form, participants were given a questionnaire packet. Due to the verbal instructions that were integral to the “context” condition procedure, assignment to condition was done at a class, not individual, level. Half of the classes completed the “context” condition and the other half completed the “no context” condition.

Participants in the “context” condition received a questionnaire packet on which the first page was blank except for the following statement: “Please *do not turn to the next page* until you have been asked to by the researcher.” The investigator and research assistants observed participants to insure that these directions are followed. Participants were asked to imagine the context situation using the protocol set forth by Levine (1988, 1991) before they were permitted to turn to the next page of their packet. First, they were asked to close their eyes while they listened to a description of and imagined

themselves to be in a practice scenario (a beach scene). They were encouraged to use all of their senses during the exercise (e.g., *hear* the waves, *feel* the hot sun) (see Appendix P for instructions and practice context). The beach context provided participants with an opportunity to practice the imaginal task so that they understood the exercise and felt more comfortable when they were given the bar context to imagine.

After participants practiced the imaginal task, they were asked once again to close their eyes and imagine a scene. They then listened to the alcohol-related context (i.e., the bar situation, Appendix A). After participants had a chance to imagine the bar situation, they were asked to open their eyes and turn to the next page of their packet. Participants were asked to imagine themselves in the bar situation while they endorsed the measure of 20 expectancy items. They were then asked to respond to the same items twice more: first to evaluate the items on a positive-negative scale and then to report what type of alcohol context they were thinking of when they initially responded to the items. Participants then completed the rest of the questionnaire packet.

Participants in the “no context” condition also received questionnaires with the first page blank except for the following statement: “Please *do not turn to the next page* until you have been asked to by the researcher.” When all participants were ready to start the study, they were instructed to turn to the first page of the packet. Like participants in the “context” condition, they were asked to endorse a set of 20 expectancy items three times: 1) to endorse expectancies on an agree-disagree scale, 2) to evaluate the expectancies on a positive-negative scale, and 3) to report what type of alcohol context they were thinking of when they initially responded to the items. The directions for the first two tasks differed from the “context” condition in that they included no direction

regarding the context that participants should use to respond to the items. Instructions for the third task remained the same as the “context” condition as there were no explicit references to context. Participants then continued to complete the rest of the questionnaire.

After participants completed the questionnaire packet, participants in psychology courses were given a receipt stating the number of extra credit points they had earned. Participants from other (nonpsychology) courses were asked to print their name on a sheet of paper provided by the investigator. When all participants finished the study, one name was selected and that person received \$10 in cash from the investigator. Finally, all participants were debriefed (Appendix Q) and thanked for their participation. This study took 30-45 minutes for participants to complete.

## Results

### *Participant Characteristics.*

A total of 846 undergraduate students at the University of South Florida participated in this study. Only participants who reported that they frequented “bars and/or clubs” once a month or more were included in the main analyses; however, data were also collected from participants who reported going to bars less frequently to reduce self-selection bias that might have resulted from advertising for “bar-goers.” Thirty-eight percent of the full sample met the criterion resulting in a “bar-going sample” of 321 participants. Data collected from the additional 525 students who went to bars less than once a month were used in exploratory analyses.

*Demographics of bar-going participants.* The demographics of the bar-going sample were similar to those of the overall sample (See Table 1). The majority of the bar-going participants were female (64.7%), Caucasian (66.5%; 15.4% Latino/a, 6.9% African-American) and heterosexual (92.2%). Ninety percent of the bar-going participants were between the ages of 18 and 25. The modal age of the bar-going participants was 18 and just over half (53.3%) were younger than the legal drinking age.

*Alcohol consumption of bar-going participants.* See Table 1 for drinking information for the bar-going participants and the full sample. Bar-going participants reported a modal frequency of drinking alcohol 2 to 3 times a month with 67.3% consuming alcohol between 2 and 8 times a month. Less than one percent of the bar-



going participants reported that they completely abstain from alcohol compared with 16.5% of the full sample. Bar-going participants reported drinking a modal quantity of 5 drinks with 79.2% drinking between 3 and 8 drinks per occasion.

Not surprisingly, the bar-going sample reported a higher level of alcohol involvement than the sample as a whole. Due to the large percentage of nondrinkers (16.5%) in the full sample, many of the modal responses reflected those of the participants who did not consume alcohol. The alcohol consumption data listed below was based on the 678 participants who reported consuming alcohol. The modal frequency of alcohol consumption for these participants was 2-3 times a month with half of the participants (52.7%) drinking between 1 and 8 times a month. The modal quantity of consumption was 3 drinks per occasion (67% drank between 2 and 8 drinks per occasion) and the modal frequency of getting drunk was 1-3 times a year with a quarter of the sample (25.7%) getting drunk more than once a month.

As stated earlier, participants were included in the “bar-going sample” if they went to bars a minimum of 1 time per month. About one-third of participants (32.1%) reported drinking in bars once a month and the same percentage (32.1%) reported drinking in bars 2-3 times a month. The remaining third of the sample (35.8%) frequented bars once a week or more. Bars were one of the most commonly reported setting for drinking. Bar-going participants also reported drinking a modal frequency of 2-3 times a month while at home with other people, at parties, and in restaurants. The modal frequency of alcohol consumption was infrequent or never for most of the other drinking settings (e.g., at sporting events, at concerts, while alone).

Table 1. Demographic and Drinking Characteristics

Variable	Bar-Going Sample (N = 321)		Full Sample <sup>1</sup> (N = 846)	
	%	Mode	%	Mode
Gender				
Female	64.7		63.0	
Male	35.3		37.0	
Age (years)		18		18
Ethnicity				
Caucasian	66.5		62.3	
Latino/a	15.4		13.3	
Black	6.9		11.6	
Asian	5.0		6.5	
Native American	0.6		0.8	
Other	5.6		5.5	
Sexual Orientation				
Heterosexual	92.2		93.5	
Bisexual	4.4		3.7	
Homosexual	3.4		2.8	
Current alcohol consumption				
Frequency		2-3 times / month		2-3 times / month
Quantity		5 drinks		3 drinks
Frequency of drunkenness		2-3 times / month		1-3 times / year
Frequency of going to bars		1 time / month		3-4 times / year

<sup>1</sup> = Alcohol consumption reports are based on only the participants who drank (N = 678)

*Demographics by condition.* One hundred and sixty-five bar-going participants (111 women, 54 men) completed the “Context” condition questionnaire while 156 bar-going participants (97 women, 59 men) completed the “No Context” condition questionnaire. The major analyses involved comparing participants in the Context condition with those in the No Context condition. To ensure that participants in these two conditions did not differ on major demographic and drinking variables, chi-square and t-test analyses were conducted. Participants in the two conditions did not differ by gender ( $\chi^2 = .838, p = .360$ ), age ( $\chi^2 = 9.970, p = .267$ ), ethnicity ( $\chi^2 = 9.235, p = .100$ ), or sexual orientation ( $\chi^2 = 1.515, p = .469$ ). Participants also did not differ on frequency of alcohol consumption ( $\chi^2 = 15.91, p = .07$ ), quantity of alcohol consumption ( $\chi^2 = 6.02, p = .645$ ), frequency of getting drunk ( $\chi^2 = 11.02, p = .274$ ), or their Total Sensation Seeking score ( $t = .076, p = .782$ ).

*Demographics by gender.* In addition to condition, the major analyses for this study involved comparing male and female participants on expectancies. Chi-square and t-test analyses were used to determine whether differences existed prior to these analyses between bar-going men and women regarding demographic and drinking variables. The bar-going sample consisted of 113 men and 208 women. No significant differences were found between bar-going men and women on ethnicity ( $\chi^2 = 1.78, p = .879$ ), sexual orientation ( $\chi^2 = 5.48, p = .065$ ), or frequency of going to bars ( $\chi^2 = 2.54, p = .637$ ). The modal age of female bar-goers (18 years) was younger than the modal age of male bar-goers (20 years) and this difference was significant ( $\chi^2 = 30.98, p < .001$ ). Male and female bar-goers also differed on their Total Sensation Seeking score ( $t = 2.17, p < .05$ ).

with men reporting a higher average Sensation Seeking score than women.

With regard to reports of drinking, male and female participants did not differ on their frequency of alcohol consumption ( $\chi^2 = 16.40, p = .06$ ) or their frequency of getting drunk ( $\chi^2 = 11.95, p = .216$ ); however, they did differ significantly on their quantity of alcohol consumption ( $\chi^2 = 36.33, p < .001$ ) with men consuming a greater quantity of alcohol per occasion than women (overall and within each condition). Men drank a modal quantity of 6-8 drinks per occasion while women drank a modal quantity of 5 drinks per occasion. Drinking variables were included as covariates in the analyses described below to prevent the confounding of gender differences with drinker level differences.

*Manipulation Check.*

*Context condition.* As a way to measure the participants' adherence to the directions regarding the bar situation, participants in the Context condition were asked to report how realistic they found the situation, how much they used it to answer expectancy items, and to provide the answers to three factual questions about the bar scene. Ninety-nine percent of participants found the bar situation to be "somewhat" or "very" realistic and 92% reported that they "sometimes" or "often" go to bars like the one described in the vignette. Only a quarter of the participants (28.8%) reported that they used the situation "very much" while responding to the expectancy items. The majority of the participants reported that they used the situation "somewhat" (41.7%) or "a little bit" (23.9%). Although participants found the situation to be realistic, their self-report suggests that they may not have used the situation as instructed.

Attention to the vignette was assessed by three factual questions about the situation and 76.5% to 85.9% of participants correctly responded to each of the items<sup>1</sup>. The number of correct responses to factual questions may have been an underestimate of participants' attention because they were given at the end of the questionnaire and after a number of questions that did not require them to keep thinking about the situation (e.g., demographic information). In addition, several participants provided feedback that they had difficulty remembering the details after the 20-30 minute delay between the context and the questions about the context

Participants in the Context condition were asked to report what type of drinking location they thought of for each of the 20 expectancy items. The purpose of this query was to determine how many participants associated the expectancy items with a bar situation as they had been asked to do. The percentage of participants who reported that they thought of a "bar and/or club" with regard to specific items depended on the type of expectancy item. The lowest percentage of participants reported that they thought of a bar situation in relation to the Tension Reduction items (24.2% – 33.9%). A larger percentage of participants related a bar to the Social (37.6% – 53.3%) and Sexual Activity (35.8% – 46.7%) items and at least half of the participants reported thinking of a bar situation in relation to the Attention items (50.3% – 64.8%) items. These numbers suggest that some participants may not have followed the instructions given to them to think of a bar context for each of the items. Even if they had thought about a bar scene earlier in the

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<sup>1</sup> To determine whether participants who answered questions incorrectly did in fact affect the outcome, the main analyses were rerun excluding the 27 participants who answered more than one question incorrectly; however, the pattern of results and significance levels for all analyses did not change. Because the questions may have been an underestimate of attention and the results did not change by excluding these participants, all participants in the Context condition were included in the analyses.

questionnaires, participants may have, in general, associated some effects more than others with drinking in a bar when asked directly to pick one context.

In sum, it appeared that most participants paid attention to the vignette and found it to be similar to bars that they frequent; however, a number of participants reported that they did not use the situation to respond to the expectancy items and reported that they associated situations other than a bar with individual items.

*No Context condition.* It was believed that participants would use a number of different situations to respond to the expectancy items if they were not given directions regarding drinking context. To test this assumption, participants in the No Context condition were also asked to report what type of drinking location they thought of for each of the 20 expectancy items. These questions were asked to also determine how many associated the expectancy items with a bar situation. Although the percentages of participants who associated each item with a bar scene were lower than those for the Context condition; however, they followed a similar pattern. The fewest participants (14.7% – 27.6%) thought of a bar situation for the Tension Reduction items. More participants (30.8% - 41%) thought of a bar situation in response to the Social expectancy items, which had originally been conceived as “general” effects (i.e., not specific to a bar situation). The Sexual Activity and Attention expectancy items had been created to be more specific to a bar context, and one-third to one-half of participants thought of a bar situation in response to these items: 30.8% to 42.3% for the Sexual Activity items and 48.4% to 52.3% for the Attention items. It appears that a relatively large number of

participants, without any direction to think of a specific drinking context, associated a bar situation with sexual activity effects, sexual attention effects, and social effects of alcohol. These participants may have responded to items similarly to those in the Context condition because they were using the same contextual situation.

Despite the large number of participants in the No Context condition who associated bars with the expectancy items and participants in the Context condition who did not associate bars with the expectancy items, analyses described below compared all of the bar-going participants in the No Context condition with all of the bar-going participants in the Context condition (regardless of which context any participants reported). Analyses comparing Context participants with No Context participants who responded with contexts other than bars could not be conducted due to the decreased number of participants that resulted and the fact that participants responded with multiple contexts for items within a single expectancy item group.

#### *Factor Analysis of Expectancy Items.*

Confirmatory Factor Analysis (CFA) was used to evaluate the proposed classification of the 20 expectancy items into four expectancy item groups for the bar-going sample. CFAs were conducted using EQS Version 5.7b (Bentler, 1995). Because the distributions of responses on expectancy items were not normal, the Robust method was specified. Model fit was evaluated using the Satorra-Bentler scaled chi-square ( $\chi^2$ ), Robust Comparative Fit Index (R-CFI) (Satorra & Bentler, 1994), Tucker-Lewis nonnormed Index (TLI; Tucker & Lewis, 1973), and the Root Mean Square Error of Approximation (RMSEA; Steiger & Lind, 1980).

Based on the hypothesized 4 types of expectancy items (Sexual Activity, Attention, Social, and Tension Reduction), a four-factor model using all twenty expectancy items was evaluated. The resulting fit indices were slightly outside of the acceptable range,  $\chi^2 (164) = 445.69, p < .001, R\text{-CFI} = .887, TLI = .856, RMSEA = .089$ , suggesting that this model did not adequately fit the data.

Modification indices suggested that model fit would be improved if two items were moved to a different factor (the Social expectancy factor). One of the items was originally hypothesized to be a Tension Reduction item (“If I am feeling restricted in any way, a few drinks make me feel better”) while the other item was originally classified as an Attention item (“I feel more comfortable getting attention after I’ve had a few drinks.”). A second four-factor model was specified, moving these two items to the factor suggested by the modification indices. However, model fit was not significantly improved after this move suggesting that these two items cross-loaded on two expectancy factors.

These two items were deleted from the analysis and a new four-factor model was specified using the 18 remaining expectancy items. The fit indices ( $\chi^2 (129) = 316.21, p < .001, R\text{-CFI} = .914, TLI = .886, RMSEA = .082$ ) suggested that this model was an adequate fit for the data. The interfactor correlations among the 4 expectancy item groups ranged from low-moderate to moderate: .44 (Sexual Activity – Social), .28 (Sexual Activity – Tension Reduction), .62 (Sexual Activity – Attention), .56 (Tension Reduction – Social), .40 (Tension Reduction – Attention), and .53 (Attention – Social).

Mean scores for the four expectancy item groups were created using the 18 expectancy items based on the results of the factor analysis. The mean scores for the



Social and Sexual Activity groups consisted of five items and the mean scores for the Attention and Tension Reduction groups consisted of four items. Means were used so that the scores of all four expectancy item groups were on the same metric despite containing different numbers of items. As a reminder, the response format ranged from 0 = strongly disagree to 5 = strongly agree.

*Endorsement of Expectancies by Gender and Context.*

It was expected that the endorsement of expectancies by bar-going individuals would vary by two variables: 1) gender, and 2) inclusion or exclusion of a drinking context in the directions. It was also expected that gender and condition would interact so that differences would occur for some expectancy items groups but not for others. A repeated measure analysis was conducted as the first step in examining gender and condition differences based on the interfactor correlations among the expectancy item groups. Some of the correlations (e.g., .62 between the Sexual Activity and Attention expectancy item groups) were fairly high suggesting that participants may have been responding to the construct of “alcohol expectancies” in general as opposed to 4 separate measures of expectancies.

A 2 x 2 repeated measures Multivariate Analysis of Covariance (MANCOVA) was conducted with two independent variables and three covariates. The two independent variables were: 1) gender as a two-level between-subjects variable (male and female), and 2) condition as a two-level between-subjects variable (Context and No Context). Alcohol consumption was included as a covariate to prevent confounding gender with

drinker level. Three items were entered separately as covariates<sup>2</sup>: 1) frequency of alcohol consumption, 2) quantity of alcohol consumed per occasion, and 3) frequency of drunkenness.

One dependent variable (“endorsement of expectancies”) with four levels was entered into the analysis. The four levels of the dependent variable were mean scores for each expectancy item group (Sexual Activity, Attention, Tension Reduction, and Social). Due to the unequal sample sizes in different cells of the analyses (most evident when comparing gender), the Pillai’s Trace statistic was used to test for significance (Tabachnick & Fidell, 1996).

The results of the MANCOVA showed a significant main effect for gender,  $F(3, 311) = 27.45, p < .001$ , and condition,  $F(3, 311) = 3.06, p < .05$ , as predicted. Contrary to hypotheses, however, the interaction of gender and condition,  $F(1, 311) = 1.82, p = .143$ , was not significant. See Table 2 for means and standard deviations by gender and condition.

Because the multivariate analysis was significant for gender and condition and in order to explore further the original hypotheses that groups would differ on their responses to some of the expectancies (e.g., Sexual Activity and Attention) but not others (e.g., Social and Tension Reduction), follow-up univariate analyses were conducted for both gender and condition. Four univariate 2 (gender) x 2 (condition) Analyses of

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<sup>2</sup> Despite the fact that a significant difference was found on only one of the three drinking items (quantity of consumption), all three items were included as covariates to control for differences that may exist but did not meet the significance criteria. For example, the item measuring frequency of alcohol consumption approached, but did not meet, significance ( $p = .059$ ). When all analyses were repeated including only quantity of consumption as a covariate, the results did not differ from those reported below based on all 3 covariates.

Table 2. Means and standard deviations of expectancy item group endorsement by gender and context.

Expectancy	Gender		Condition	
	Male	Female	Context	No Context
Sexual Activity	2.51 (1.15)	1.59 (1.15)	1.87 (1.21)	1.97 (1.25)
Attention	2.12 (1.10)	2.11 (0.99)	2.14 (0.95)	2.09 (1.11)
Tension Reduction	2.89 (1.14)	3.05 (0.97)	3.13 (0.92)	2.84 (1.12)
Social	3.36 (0.91)	3.35 (0.96)	3.40 (0.89)	3.31 (0.99)

Note: Responses were on a 0 to 5 point scale (0 = strongly disagree, 1 = disagree, 2 = slightly disagree, 3 = slightly agree, 4 = agree, 5 = strongly agree)

Covariance (ANCOVAs) were conducted to determine whether participants responded to specific item groups differently by gender or condition. One ANCOVA was run for the endorsement of each of the four expectancy item groups. As with the multivariate analyses, alcohol consumption items were included as covariates in all analyses.

It had been expected that gender and condition would interact so that gender differences would be significant when context was specified (Context condition) but not when participants were free to think about any drinking context that they wanted (No Context condition). However, similar to the repeated measures MANCOVA, the gender x condition interaction in the ANCOVA analyses was not significant for any of the expectancy item groups ( $ps > .05$ ). The condition x gender interaction may not have been significant due to the previously discussed finding that participants in both conditions reported thinking about similar contexts therefore decreasing the difference between the two conditions.

Although the interactions were not significant, several main effects were significant by either gender or condition and are described below. See Table 2 for means and Table 3 for significance levels from the main effect analyses. See Figure 1 for a

visual representation of the main effects for gender and Figure 2 for a visual representation of the main effects for condition. The significant main effects are marked on the figures with an asterisk.

Table 3. Significant main effects and interactions for endorsement of expectancy items.

Expectancy	Gender	Condition	Gender x Condition Interaction
Sexual Activity	$p < .001$	n.s.	n.s.
Attention	n.s.	n.s.	n.s.
Tension Reduction	$p < .05$	$p = .001$	n.s.
Social	n.s.	n.s.	n.s.

Figure 1. Endorsement of expectancies by gender.

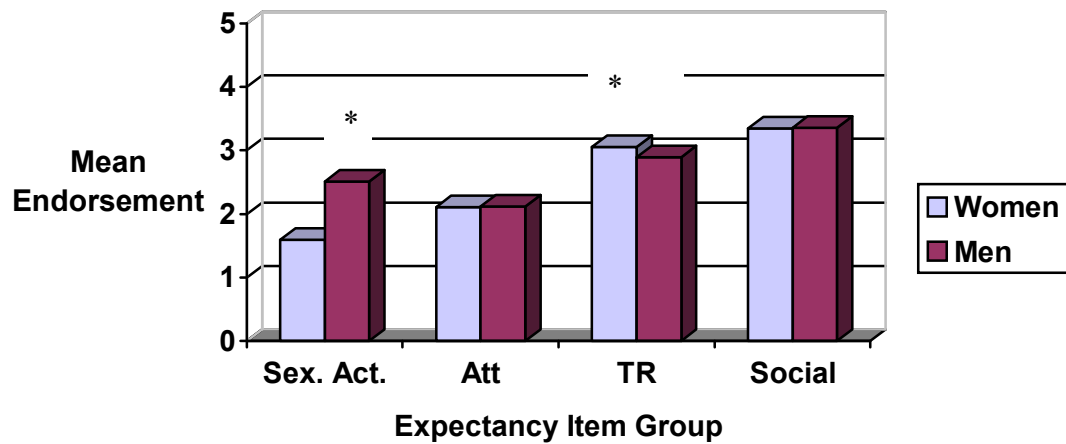
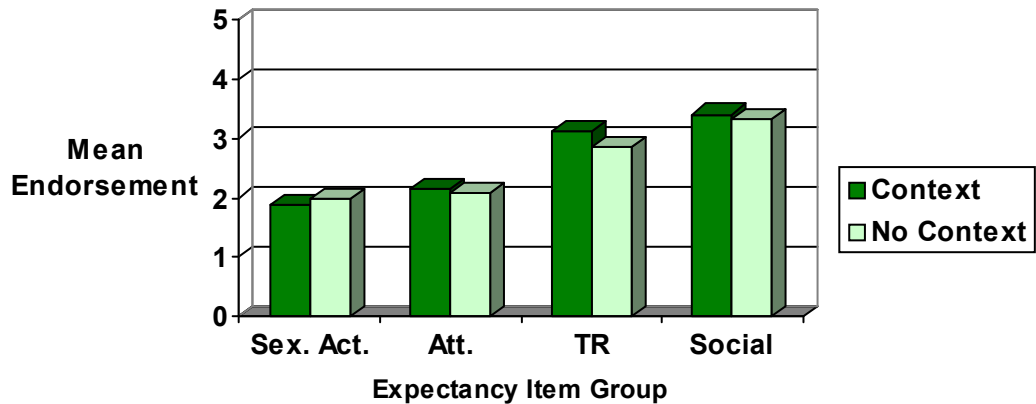


Figure 2. Endorsement of expectancies by condition.



Although differences in the endorsement of expectancies by gender were found for some expectancy item groups, the results only partially followed the expected pattern. It had been expected that men would more strongly endorse Sexual Activity expectancies while women would more strongly endorse Attention expectancies. As expected, a main effect for gender were found for the endorsement of Sexual Activity expectancies,  $F(1, 313) = 37.96, p < .001$ , with men endorsing such effects more strongly than women. Men were neutral regarding their endorsement of sexual activity (their mean score fell at the midpoint of the scale indicating neither strong agreement nor disagreement) while women disagreed that it would occur when they consumed alcohol. Men and women did not differ in their endorsement of Attention expectancies,  $F(1, 313) = 1.19, p = .277$ . The means scores of both genders (Men  $M = 2.12$ , Women  $M = 2.11$ ) suggested that they slightly disagree that these effects occur when they drink.

As predicted, men and women did not differ on their endorsement of Social expectancies,  $F(1, 313) = 0.33, p = .565$ , and both slightly agreed that these effect occur when they drink. Contrary to hypothesis, a significant main effect was found for Tension Reduction expectancies,  $F(1, 313) = 5.15, p < .05$ , with women reporting a

slightly higher mean score ( $M = 3.05$ ) for the Tension Reduction effects than men ( $M = 2.89$ ). Both men and women slightly agreed that these effects would occur when they drank.

Differences in expectancies had been predicted for the interaction of gender and condition, but not specifically for the main effects of condition. The only significant main effect for condition was found for Tension Reduction expectancies,  $F(1, 313) = 10.63, p = .001$ . Recall that participants in both conditions but especially the No Context condition were least likely to report thinking of a bar situation for these effects. Participants in the Context condition (imagining a bar scene) reported a slightly higher mean score than participants in the No Context condition and they both slightly agreed that these effects would occur. Differences on expectancies by condition were not significant for Sexual Activity,  $F(1, 313) = 0.04, p = .852$ , Attention,  $F(1, 313) = 0.94, p = .333$ , or Social expectancies,  $F(1, 313) = 0.69, p = .407$ . In general, bar-goers slightly disagreed that Sexual Activity and Attention effects occur, slightly agreed that Tension Reduction effects would occur, and slightly agreed that Social effects would occur when they consume alcohol regardless of whether they were asked to imagine a bar setting or not.

#### *Additional Exploratory Analyses.*

*Endorsement of specific items by gender and condition.* A series of  $2 \times 2$  ANCOVAs were conducted for each of the 20 expectancy items. The purpose of this analysis was to investigate whether responses differed or remained constant based on the specific content of items within the expectancy item group. See Appendix B for the list of items and Table 4 for the results of the analyses by gender and condition. The results of these analyses were generally similar, but not identical, to those using the expectancy

Table 4. Means (Standard Deviations) and significant main effects for the endorsement of individual expectancy items.

Item	Women	Men	Gender <i>p</i> -value	Context	No Context	Condition <i>p</i> -value
SA 1	1.72 (1.48)	2.68 (1.40)	.001	2.07 (1.47)	2.05 (1.59)	n.s.
SA 2	1.64 (1.44)	2.14 (1.51)	.05	1.87 (1.45)	1.77 (1.52)	n.s.
SA 3	2.00 (1.52)	2.65 (1.55)	.01	2.08 (1.45)	1.77 (1.52)	n.s.
SA 4	1.16 (1.31)	2.48 (1.54)	.001	1.53 (1.42)	1.73 (1.63)	n.s.
SA 5	1.44 (1.39)	2.62 (1.46)	.001	1.81 (1.47)	1.92 (1.57)	n.s.
Att. 1	2.50 (1.33)	2.32 (1.30)	.05	2.51 (1.17)	2.36 (1.46)	n.s.
Att. 2	1.41 (1.35)	1.73 (1.41)	n.s.	1.44 (1.29)	1.60 (1.47)	n.s.
Att. 3	2.34 (1.20)	2.37 (1.34)	n.s.	2.46 (1.19)	2.24 (1.30)	.05
Att. 4	2.51 (1.38)	2.58 (1.36)	n.s.	2.65 (1.30)	2.42 (1.45)	n.s.
Att. 5	2.19 (1.28)	2.07 (1.31)	n.s.	2.15 (1.24)	2.15 (1.34)	n.s.
TR 1	3.01 (1.30)	2.80 (1.47)	.05	3.09 (1.18)	2.78 (1.52)	.05
TR 2	3.05 (1.33)	2.90 (1.40)	n.s.	3.01 (1.34)	2.94 (1.37)	n.s.
TR 3	3.14 (1.19)	2.97 (1.51)	n.s.	3.29 (1.16)	2.87 (1.43)	.001
TR 4	2.77 (1.20)	2.74(1.32)	n.s.	2.96 (1.10)	2.55 (1.35)	.01
TR 5	2.99 (1.22)	2.88 (1.32)	n.s.	3.09 (1.13)	2.80 (1.37)	.01
Soc 1	3.82 (1.03)	3.79 (0.96)	n.s.	3.84 (0.92)	3.78 (1.09)	n.s.
Soc 2	3.65 (1.12)	3.74 (1.07)	n.s.	3.70 (1.08)	3.78 (1.09)	n.s.
Soc 3	2.51 (1.38)	2.57 (1.44)	n.s.	2.57 (1.34)	2.48 (1.46)	n.s.
Soc 4	3.56 (1.16)	3.44 (1.12)	n.s.	3.61 (0.99)	3.42 (1.28)	n.s.
Soc 5	3.24 (1.26)	3.25 (1.22)	n.s.	3.29 (1.22)	3.19 (1.26)	n.s.

SA = Sexual Activity, Att = Attention, TR = Tension Reduction, Soc = Social. See Appendix B for items. Responses were on a 0 to 5 point scale (0 = strongly disagree, 1 = disagree, 2 = slightly disagree, 3 = slightly agree, 4 = agree, 5 = strongly agree)  
None of the Gender x Condition interactions were significant.

summary variables. Similar to the previous analyses, the gender x condition interaction was not significant for the endorsement or evaluation of any item ( $ps > .05$ ).

When individual items were analyzed, men more strongly endorsed each of the five Sexual Activity expectancy items as predicted. The results for items more strongly endorsed by women differed somewhat from the previous results. Although the prediction that women would more strongly endorse the Attention item group than men

was not found, women did endorse more strongly one of the Attention items (“When I drink, I get a lot of sexual attention from others”). In the prior analysis, a main effect had been found for women endorsing the Tension Reduction expectancy item group more strongly than men. Analysis by item showed that although women had higher average mean score when five Tension Reduction items were considered, only one item reached significance (“When I feel anxious, drinking alcohol helps me to relax.”) suggesting that this one item may have driven the significant effect. There were no significant gender differences found for the endorsement of any Social expectancy item.

Similar to earlier analyses, only a few differences were found when individual expectancy items were analyzed by condition. Participants in the Context condition were more likely to endorse four of the Tension Reduction items and one of the Attention items (“When I am drinking alcohol, I feel good about the way that people notice me.”) than those in the No Context condition. There were no other significant differences between the conditions on endorsement of items. This pattern of results was similar to those found in the prior analysis.

*Evaluation of expectancy items.* It was hypothesized that, apart from differing on their endorsement of expectancies, the *interpretation* of expectancies might differ by gender and condition. Although it was expected that bar-goers might differ regarding their evaluation of expectancies, these analyses were considered to be exploratory and specific hypotheses had not been made. To learn more about how individuals rate the valence of different expectancies, participants were asked to evaluate each expectancy effect on a scale ranging from completely negative (0) to completely positive (5). A series of 2 x 2 ANCOVAs were conducted for the evaluation of each of the 20



expectancy items. See Table 5 for the results of the analyses by gender and condition. Similar to the endorsement of expectancy items, the gender x condition interaction was not significant for any item ( $ps > .05$ ).

Men evaluated all five Sexual Activity expectancy items and four of the Attention items as significantly more positive than did women. Men tended to rate these effects as neutral or slightly positive while women judged them to be negative. Women did not evaluate any expectancy item as more positive than did men and there were no gender differences were found for the evaluation of Social or Tension Reduction expectancy items. In general, men and women found tension reduction and social effects to be slightly positive.

Similar to earlier analyses, only a few condition differences were found when individual expectancy items were analyzed. Participants in the Context condition rated the four out of five of the Tension Reduction items as more positive than participants in the No Context condition. The mean scores on these items were similar and both groups judged these effects to be slightly positive. There were no other significant differences between the conditions on evaluation of items.

*Sensation seeking.* To determine the effect of the personality variables of sensation seeking, which is related to alcohol consumption, on the endorsement of expectancies, a series of multiple regressions were run. These analyses were considered to be exploratory in nature and there were therefore no specific hypotheses set forth regarding the results. Stepwise multiple regressions were run with the mean score of each of the four expectancy item groups as separate criteria. Gender, condition, and sensation

Table 5. Means (Standard Deviations) and significant main effects for the evaluation of individual expectancy items.

Item	Gender		Context	No Context	Condition	
	Women	Men				<i>p</i> -value
SA 1	1.21 (1.25)	2.61 (1.44)	.001	1.59 (1.45)	1.83 (1.50)	n.s.
SA 2	1.14 (1.28)	2.55 (1.57)	.001	1.61 (1.56)	1.67 (1.53)	n.s.
SA 3	1.33 (1.28)	2.91 (1.46)	.001	1.77 (1.56)	2.01 (1.52)	n.s.
SA 4	0.60 (1.05)	1.83 (1.53)	.001	.092 (1.26)	1.16 (1.47)	n.s.
SA 5	0.97 (1.12)	2.43 (1.41)	.001	1.37 (1.39)	1.60 (1.44)	n.s.
Att. 1	1.99 (1.25)	2.78 (1.39)	.001	2.29 (1.33)	2.24 (1.38)	n.s.
Att. 2	1.35 (1.29)	2.48 (1.52)	.001	1.71 (1.50)	1.78 (1.46)	n.s.
Att. 3	2.43 (1.33)	2.73 (1.32)	n.s.	2.60 (1.33)	2.47 (1.34)	n.s.
Att. 4	2.54 (1.25)	2.91 (1.21)	.05	2.81 (1.21)	2.53 (1.26)	n.s.
Att. 5	1.83 (1.28)	2.59 (1.41)	.001	2.13 (1.36)	2.06 (1.38)	n.s.
TR 1	2.93 (1.20)	2.92 (1.34)	n.s.	3.17 (1.08)	2.67 (1.36)	.001
TR 2	2.80 (1.31)	2.98 (1.21)	n.s.	2.95 (1.25)	2.78 (1.30)	n.s.
TR 3	3.00 (1.21)	3.13 (1.33)	n.s.	3.17 (1.21)	2.91 (1.29)	.01
TR 4	2.77 (1.13)	2.98 (1.10)	n.s.	2.98 (1.07)	2.71 (1.16)	.05
TR 5	2.89 (1.15)	3.08 (1.19)	n.s.	3.14 (1.02)	2.76 (1.28)	.001
Soc 1	3.41 (1.15)	3.43 (1.12)	n.s.	3.46 (1.10)	3.38 (1.17)	n.s.
Soc 2	3.36 (1.17)	3.48 (1.00)	n.s.	3.42 (1.06)	3.39 (1.67)	n.s.
Soc 3	2.81 (1.43)	2.90 (1.38)	n.s.	2.96 (1.41)	2.71 (1.41)	n.s.
Soc 4	3.43 (1.14)	3.43 (1.07)	n.s.	3.50 (1.13)	3.36 (1.09)	n.s.
Soc 5	3.28 (1.19)	3.45 (1.15)	n.s.	3.41 (1.17)	3.26 (1.19)	n.s.

SA = Sexual Activity, Att. = Attention, TR = Tension Reduction, Soc = Social. See table 1 for items.  
 Responses were on a 0 to 5 point scale (0 = completely negative, 1 = negative, 2 = slightly negative, 3 = slightly positive, 4 = positive, 5 = completely positive)  
 None of the Gender x Condition interactions were significant.

seeking were entered as separate predictors in each analysis. See table 6 for a summary of the regression analyses results.

*Table 6.* Summary of regression analyses using mean endorsement of expectancy item group as the criteria.

	$\beta$ weight	Adjusted R <sup>2</sup>	R <sup>2</sup> change	r <sup>+</sup>
<b>Sexual Activity</b>				
Gender	.344***	.126		.358
Sensation Seeking	.117*	.137	.013	.158
(Condition)	n.s.			.041
<b>Attention</b>				
Sensation Seeking	.176**	.028		.176
(Condition)	n.s.			-.025
(Gender)	n.s.			.007
<b>Social</b>				
Gender	n.s.			.002
Condition	n.s.			-.050
Sensation Seeking	n.s.			.037
<b>Tension Reduction</b>				
Condition	-.140*	.016		-.140
(Sensation Seeking)	n.s.			.088
(Gender)	n.s.			-.075

<sup>+</sup> Correlation between variable and expectancy item group mean score

\* p<.05

\*\* p<.01

\*\*\* p<.001

Sensation seeking was a significant predictor for two of the expectancy item groups: Sexual Activity and Attention expectancies. For Sexual Activity effects, gender accounted for approximately 13% of the variance in the endorsement of these expectancies and sensation seeking added 1% of explanatory variance (condition was not a significant predictor of variance). For attention effects, sensation seeking accounted for 3% of the variance while gender and condition did not add a significant amount of variance. Only condition accounted for a significant amount of variance for Tension

Reduction effects (2%) and none of the three variables explained a significant amount of variance for the Social effects of alcohol.

*Definition of Expectancy Terms.*

It was hypothesized that gender differences in expectancies might be reflected in differences in the meanings that men and women apply to expectancy items. To investigate this hypothesis, participants were asked to decide whether each of a series of behaviors would be included in their definition of two of the more ambiguous expectancy terms: “hooking up” and “receiving attention.” These responses were analyzed for differences by comparing the endorsement (recoding “yes” as a 1-point response and “no” as a 0-point response) of each specific behavior and by comparing the total number of behaviors included in the definition of each term. Because it was expected that participants would have opinions about the definition of these terms regardless of drinking or bar experience, analyses were repeated in both the bar-going participants and the entire sample.

*Specific behaviors included in the definitions.* Percentages were calculated to examine which behaviors were most often included in the definition of the two expectancy terms. See Table 7 for the percentages of men and women who included each behavior in their definition. For both the bar-going sample and the full sample, the behaviors most likely to be included in defining the term “attention” were: “talking to me” (bar-going: 88%; entire sample: 82%) and “approaching me” (bar-going: 87%, entire sample: 81%). The behaviors least likely to be included in defining the term “attention” were: “touching me” (in a casual manner) (bar-going: 60%, entire sample: 58%) and

Table 7. Percent of men and women who endorsed behaviors as being included in the definition of expectancies phrases.

Behavior	Bar-going Sample (N = 321)			Whole Sample (N = 846)		
	Men	Women	<i>p</i> -value	Men	Women	<i>p</i> -value
<b>“Attention”</b>						
1. Looking at me	74	80	n.s.	63	77	<i>p</i> < .001
2. Verbal comments	79	87	n.s.	66	82	<i>p</i> < .001
3. Buying me a drink	66	85	<i>p</i> < .001	54	76	<i>p</i> < .001
4. Touching	67	57	n.s.	56	58	n.s.
5. Approaching me	81	90	<i>p</i> < .05	74	85	<i>p</i> < .001
6. Talking to me	90	87	n.s.	78	85	<i>p</i> < .05
7. Asking for phone #	76	84	n.s.	69	81	<i>p</i> < .001
8. Kissing me	73	57	<i>p</i> < .01	66	57	<i>p</i> < .05
<b>“Hooking up”</b>						
1. Talking	35	28	n.s.	33	32	n.s.
2. Asking for phone #	48	37	n.s.	45	45	n.s.
3. Asking for a date	54	43	n.s.	55	53	n.s.
4. Flirting	47	36	n.s.	42	39	n.s.
5. Casual touching	37	29	n.s.	38	35	n.s.
6. Kissing	72	73	n.s.	67	67	n.s.
7. Sexual activity	80	71	n.s.	70	66	n.s.
8. Oral sex	79	67	<i>p</i> < .05	72	61	<i>p</i> < .01
9. Sexual intercourse	78	67	<i>p</i> < .05	72	63	<i>p</i> < .05

“kissing me” (bar-going: 63%, entire sample: 61%). It should be noted that even the least frequently endorsed behaviors were included by over half of the sample.

For the term “hooking up,” the behaviors most likely to be included in the definition were “sexual activity” (bar-going: 74%, entire sample: 67%) and “kissing” (bar-going: 73%, entire sample: 67%). The behaviors least likely to be included in the definition were “talking” (bar-going: 30%, entire sample: 32%) and “casual touching” (bar-going: 32%, entire sample: 36%). Percentages for the least frequently endorsed

behaviors were lower in this analysis, including only one-third of the sample. In addition, some of the least frequent behaviors included in the term “hooking up” were much more likely to be included in the definition of “attention.”

Chi-squares were conducted for each of the 17 behaviors (8 for the term “attention,” 9 for the term “hooking up”) to determine whether men and women differed in their inclusion of specific behaviors in the definition of either term. See Table 7 for significance levels for each behavior.

For the bar-going sample, men and women differed on 3 of the 8 “attention” behaviors and 2 of the 9 “hooking up” behaviors. For the full sample, men and women differed on 7 of the “attention” behaviors and 2 of the “hooking up” behaviors. Regarding “attention,” women were more likely than men to include the majority of these behaviors (except for “kissing me”) in their definition of the term. For the term “hooking up,” men were more likely than were women to include “oral sex” and “sexual intercourse” in their definition. Although these differences were significant, it should be noted that the percentages of endorsement were generally high for both genders (see Table 7).

Men and women may define these sexually related terms differently and, hence, may have used different definitions when responding to the expectancy items. It is also possible that men are more comfortable than women in endorsing more explicit behaviors. In general, men were more likely to report including physical intimacy in their definition of sexually related terms. For example, when responding to the expectancy item that used the phrase “hooking up,” women may have been referring to less extreme sexual behavior than were men (e.g., oral sex and sexual intercourse). Similarly, when responding to items about “attention” or “sexual attention” more men may have been

thinking about physical contact (e.g., kissing) than women. Gender differences were more pronounced for the phrase “attention” when the entire sample was included in the analysis than when just the bar-goers were considered while gender differences were found on the same two items for both samples for the term “hooking up.”

*Total number of behaviors included in definitions.* Gender differences in the total number of behaviors included in each expectancy term were analyzed by t-tests to determine whether men and women differed in the number of behaviors that they included in each term. When only bar-going participants were included in the analysis, men and women did not differ significantly in the number of behaviors that they endorsed for the term “attention” or the term “hooking up” ( $p > .05$ ). For the term “attention,” men included an average of 6.1 behaviors while women included an average of 6.3 behaviors. For the term “hooking up,” men included an average of 5.3 behaviors while women included an average of 4.5 behaviors.

However, when the entire sample was evaluated, significant differences emerged for the number of behaviors included in both the term “attention” and the term “hooking up.” The number of behaviors included by men and women depended on the phrase. For the term “attention,” women included approximately 1 more behavior than did men (women = 6, men = 5.3;  $p < .001$ ). For the term “hooking up,” men included a slightly greater number of behaviors than did women (men = 4.9, women = 4.6;  $p < .001$ ). Again, gender differences were more pronounced in the entire sample than in the bar-going participants. These significant results may be more reflective of the larger sample size in the full sample and not a meaningful difference between the means. This explanation is supported by the fact that, although there was a greater difference between genders on the

means for the term “attention” (.2 for the bar-going sample and .7 for the full sample), the mean difference for “hooking up” also became significant despite a decrease in the mean difference (.8 for the bar-going sample and .3 for the full sample).



## Discussion

### *The Purpose of the Current Study.*

The current study investigated the influence of gender and drinking context on the endorsement of alcohol expectancies. Previous research on gender differences has been conflictual about whether differences exist and on which specific beliefs men and women differ. The current study was designed to explore issues raised from a review of the past research on gender differences including context of drinking and interpretation of expectancy items.

### *Context and Endorsement of Expectancies.*

Past research on gender differences, in general, did not take context of drinking into account. However, other studies that included context as a variable of interest (e.g., Levine, 1991) found that endorsement of expectancies varied depending on drinking situation. In this study, it was hypothesized that providing a drinking context (e.g., a bar scene) would result in gender differences in the endorsement of expectancies specific to that setting (e.g., sexual activity and attention effects). It was further hypothesized that gender differences would not occur without the specified drinking context because there would be no control over the context each participant used to respond to the items. It was believed that responses to more general expectancies (e.g., social and tension reduction effects) would not depend on whether or not a context was provided.

Contrary to hypothesis, gender and condition did not interact and few differences

were found between drinkers in the two conditions. Differences between the groups may have been reduced due to issues related to context in both conditions. In the Context condition, a quarter of the participants reported that they only used the context situation “a little bit” when responding to the items and a large number of participants associated the items with drinking situations other than a bar. Participants may have thought of other settings because they completed the study in a classroom setting. A stronger effect might have been found if the context prime was stronger, i.e., closer to an actual bar. Although participants were asked to imagine the situation to make it more realistic for their own lives, this method may have led to a generally weaker prime and fewer group differences.

On the other hand, many participants in the No Context condition associated a bar situation with sexual activity, sexual attention, and social effects of alcohol. Many of these items were created from interviews with drinkers about their experiences at bars and their content may have been obviously tied to bars for drinkers even without an explicit mention of a “bar situation.” As a result, the No Context participants may have responded to the items similarly to the Context participants also reducing differences between the groups.

Despite these limitations, the results of this study offer some suggestion that context of drinking and expectancies may be related. Many participants in both conditions associated sexual and social effects of alcohol with a bar setting. These effects may be more likely to be associated with settings such as bars or parties than other types of drinking settings. Like the No Context condition, many questionnaires (e.g., the Effects of Drinking Alcohol Scale; Critchlow, 1987; Leigh, 1987) provide expectancy items with no information about drinking context. These results suggest that some

expectancy items may carry an implicit context with them without the researcher's awareness.

Not all effects were equally associated with a bar context. Fewer participants reported that they associated tension reduction effects with a bar setting even if they were instructed to think about a bar. Despite the lower numbers of drinkers who endorsed the bar setting in either condition, participants in the Context condition rated tension reduction effects as more likely to occur and more positive than participants in the No Context condition. The tension reduction effects of alcohol may be considered positive by drinkers who see bars as places to get away from the stress of daily life or for those who want to enjoy the social aspects of bars but experience anxiety in social situations. On the contrary, using alcohol to relax in other settings may be viewed as unnecessary (e.g., when drinking with friends when the person is less likely to be anxious) or as negative (e.g., when drinking alone). So drinkers' schemas about a "bar setting" context (or other settings) may not just include information about which beliefs "fit" in this situation but also which beliefs do not fit or are not as appropriate.

Most past studies on gender differences have not included context as a major part of their methodology. Although few condition differences were found, the results gave some indication that expectancies were differentially associated with different drinking contexts. Continuing to investigate the beliefs associated with a specific drinking situation, with careful attention to methodology, could be useful for future research on expectancies. Learning about specific drinking contexts may help to provide information about the general mechanism of expectancies (e.g., how and why do drinkers develop different beliefs about alcohol in different situations?) and may be useful in targeting

research toward contexts that result in higher levels of drinking and/or more negative consequences for drinkers (e.g., a consistent pattern of drinking alone, the high incidence of sexual assault associated with alcohol consumption).

*Gender and the Endorsement of Expectancy Items.*

*Social expectancies.* The social effects of alcohol were considered to be the most likely to occur and also the most positive of all of the expectancies. As expected, men and women did not differ in their beliefs about such effects. A relatively large number of drinkers associated social effects with bar settings. In addition, pilot data for this study (Weinberger, Darkes, Del Boca, & Goldman, 2003) found that “to spend time with friends” and “to socialize” were in the top 3 reasons cited by men and women for going to bars and these reasons were important regardless of level of alcohol consumption. Other studies that examined reasons for going to bars (Parks *et al*, 1998; Parks & Scheidt, 2000; Strouse, 1987) also found that social reasons were very important to men and women of all drinking levels. These expectancies were hypothesized to be more “general” beliefs and the results of this study do suggest that they are held by many different types of drinkers.

*Tension reduction expectancies.* The tension reduction effects of alcohol were considered somewhat likely to occur and slightly positive by most drinkers. Although it was not expected that men and women would differ on such beliefs, women reported that these effects were more likely to occur than did men. However, the mean values were very similar for men and women (0.16 on a 5-point scale) so this difference, while statistically significant, may not be clinically meaningful. In addition, follow-up item analyses revealed that women scored significantly higher on only one of the five items

(“When I feel anxious, drinking alcohol helps me to relax.”). Follow-up work could investigate tension reduction effects more closely to determine whether men and women do differ in their beliefs, what “alcohol helps me relax” specifically means to different types of drinkers, and (as discussed above) how tension reduction effects are related to different drinking contexts.

*Attention expectancies.* It was hypothesized that men and women would differ on effects of alcohol that were more expressly related to bar situations. Specifically, it had been expected, based on focus groups and past research (Parks *et al*, 1998), that women would endorse expectancies related to receiving sexual attention more strongly than men; however, this pattern was not found. The expected results may not have been found because of the language used in the items or the methods used to develop the items.

Items about attention were worded in a way to clarify that the attention was “sexual attention” (as opposed to attention from friends). There is some evidence that men are more likely to use more explicit sexual terms and have a different sexual vocabulary from women (Murnen, 2000; Sanders, 1978; Simkins & Rinck, 1982; Strouse, 1987). In his study of reasons why men and women go to bars, Strouse (1987) reported that men were more “blunt, direct, and sexual in their responses” (p. 379) than were women. A related line of research has shown that men perceive other people and relationships as more sexualized than do women (Abbey & Harnish, 1995; Abbey, Ross, McDuffie, & McAuslan, 1996a). This type of misperception has been implicated as a factor in sexual aggressiveness (Abbey, McAuslan, & Ross, 1998; Abbey, Ross, McDuffie, & McAuslan, 1996b) showing how these beliefs may be related to negative outcomes.

In addition to men being more likely to use a more strongly sexualized vocabulary, women may temper their responses to questions about sexual behavior to be consistent with society's expectations. A recent study (Alexander & Fisher, 2003) found that women's responses to questions about sexual behavior depended on testing condition while men's responses did not: women reported sexual behavior that could be considered more "socially appropriate" (e.g., a fewer number of sexual partners) when they filled out a survey than when they believed that they were attached to a lie detector. Women may be more sensitive to responding to items that include sexual wording. By including the phrase *sexual attention*, women may have tempered their responses to be more socially desirable or because they use a less explicit vocabulary regarding sexual issues.

Finally, items about sexual attention were translations of ideas that women discussed in focus groups. Statements made in the focus groups used in the development of sexual attention expectancy items may not have been adequately translated into expectancy items or women may have been more likely to talk about these effects in a group setting than when presented with items on a paper survey (perhaps related to Alexander & Fisher, 2003's findings reported in the previous paragraph). Although men and women did not differ in their endorsement of these items, they did have different reactions to the items by valence. Men were more likely to say that these effects were positive while women reported that they were negative. Again, this pattern could be due to women and men responding in a way that would be considered more "socially appropriate." It also may have been that women were more conscious of the negative consequences that could occur from sexual attention, many of which are more likely to occur to them than to men (e.g., sexual assault, misinterpretation of friendliness).

*Sexual activity expectancies.* Past research on gender differences mostly asked men and women to endorse expectancy items and have rarely examined whether men and women would differ in their interpretation of expectancy items. This type of methodology may overlook more subtle differences such as whether men and women construe items differently. It was hypothesized that men and women would differ in their endorsement, evaluation, and definition of effects related to “sexual activity.”

In this study, men were more likely to endorse effects of alcohol related to sexual activity than women. In addition, they evaluated effects related to sex (sexual activity and sexual attention) as positive while women rated them as negative. Finally, men and women differed in the behaviors with which they defined two of the more ambiguous expectancy terms: “hooking up” and “attention.” These results are consistent with the findings of an earlier study (Des Rosiers *et al.*, 2002) in which men evaluated the alcohol effect of the term “loose” as positive while women rated it to be negative.

The findings of this study offer some evidence that, in addition to holding different beliefs about the sexual effects of alcohol, men and women mean different things when they talk about sex and sexual effects. Interpretation of these findings is complicated by the fact that, although men have been found to have a greater desire for sex than women while women connected sex more closely to the context of a committed relationship than men (Peplau, 2003), men and women also differ in their sexual vocabulary and sensitivity to socially appropriate responses. Because men and women do seem to be reporting differences related to the sexual effects of alcohol, this type of expectancy may be a useful area for future research.

*Theoretical mechanisms.* Why might men and women view expectancies related to sex differently? As discussed in the introduction, gender *per se* is not an explanation for differences between men and women and it is important to understand the process or variables that underlie differences. In this study, sensation seeking was included in exploratory analyses to determine whether that variable explained significant gender differences. Although sensation seeking explained a statistically significant amount of variance for the two sexually related expectancy item groups (Sexual Activity and Attention), the actual percentage of variance explained by the personality variable was very small (3% and 1%) and may not be practically significant. Although sensation seeking did not provide much explanatory information about these expectancies, it is important to continue to investigate variables that might explain differences between men and women and to include these variables in research methodologies.

Two other possible explanations for gender difference, socialization and evolutionary theory, were not tested in this study but will be briefly described below. Socialization commonly has been offered as an explanation for gender differences for different aspects of alcohol use (e.g., Borjesson & Dunn, 2001; Gotham, Sher, & Wood, 2003; Lopez, Martinez, Martin, Martin, & Scandroglio, 2001). Men may be more likely to learn from others (e.g., society, parents, peers, media) that sexual activity is a possible and positive outcome of alcohol consumption, and that sexual intercourse should be the desired result in certain situations (e.g., while drinking in a bar). Women may be more likely to receive the opposite message. They may be discouraged from viewing a relationship between alcohol and sex as positive due to the dangerous, and mainly gender-specific, consequences of sexual activity (e.g., sexual assault and pregnancy). As



a result, men may focus on the pleasurable aspects while women also consider the negative consequences when thinking about sexual activity. Related to that, women may also view the desired outcome of interaction with men in terms of relationships and intimacy behaviors and not necessarily sexual intercourse. These opposing views of sexual activity are consistent with the pattern of gender differences found in this study.

Another possible reason for gender differences in sexual expectancies comes from the area of evolutionary psychology. According to evolutionary psychology theories, men and women are expected to react differently to casual sexual activity and meeting sexual partners (see Buss, 1994; special issue of *Personal Relationships*, December 2001). Men should be more interested in casual sexual contact so they would have more opportunities to pass their genes successfully on to the next generation. On the other hand, women should be less interested in casual and frequent sexual contact because they bear a heavier burden should this contact result in pregnancy. In addition, a woman may be less likely to get the father to direct his resources toward her and their child if the sexual contact was casual and not within the context of a monogamous, long-term relationship. Many of the sexually related expectancy items explicitly refer to casual sexual contact (e.g., “Alcohol makes it more likely that I will meet someone with whom I can share a sexual experience.”). Evolutionary theories should suggest that it would be adaptive for men to find these ideas to be more positive and to pursue these opportunities and for women to find casual contact to be negative.

#### *Implications for Intervention or Prevention Programs.*

In general, bar-goers judged the “general” expectancies (social and tension reduction) to be more likely to occur and more positive than the “specific” expectancies

(sexual activity and attention). While conducting pilot work for the main study, male and female bar-goers were asked to rate the importance of a variety of reasons for going to bars. Men and women of all drinking levels placed a high level of importance on going to bars to socialize, spend time with friends, and escape from daily life, but were much less likely to report that they view bars as places to “hook up” or to receive attention (Weinberger *et al.*, 2003). Including the social effects of alcohol in prevention or intervention efforts would provide information relevant to a large number of drinkers, regardless of their gender or drinking level.

It may be a more specialized group of drinkers who hold expectancies related to sexual behavior. As discussed earlier, men were more likely to hold such beliefs; however, these beliefs may also relate to personality and lifestyle variables such as being sexually active with a large number of partners or higher levels of sensation seeking. In the current study, reporting a greater number of sexual partners of the past 12 months, having a greater percentage of partners that were casual (as opposed to steady), and having a higher sensation seeking score were all more strongly correlated to endorsement of sexual activity and attention expectancies than the social and tension reduction expectancies. Although these expectancies may be endorsed by a smaller group of drinkers, these are also effects that could be related to negative consequences of alcohol consumption such as sexual misunderstandings and sexual assault. Including information about sexual effects of alcohol in prevention and intervention programs may not appear to be relevant to as many drinkers; however, these beliefs can affect male-female interactions and do not need to be endorsed in order to cause problems for a drinker

(e.g., receiving unwanted sexual attention, having his or her intentions misunderstood because of the other person's beliefs).

Finally, the results of this study suggest areas of information that could be included in intervention programs with bar-goers. For example, it may be helpful to discuss the specific contexts in which the person drinks and their beliefs about what alcohol will do for him or her in those contexts. It may also be useful to educate male and female drinkers about the gender differences in beliefs about sex and alcohol and defining sexually related terms. Both of these topics would help drinkers gain a better understanding of their own drinking as well as the drinking of others in their environment.

#### *Limitations and Future Directions.*

This study was conducted with a group of undergraduate college students who were mainly Caucasian and heterosexual. Bars are viewed as a common social activity and place to consume alcohol within college communities. Reasons for, and beliefs about, drinking in bars may be different in populations such as non-student adults who frequent bars. Due to the size of the sample, subgroups of drinkers could not be analyzed; however, differences in expectancies for drinking in bars may differ by variables such as ethnicity or sexual orientation. Future studies of expectancies in these groups of drinkers would provide useful information for understanding their pattern of drinking and when targeting members of these populations for intervention or prevention efforts.

For this study, "specific" expectancy items came from focus group information and participants were asked to evaluate and define some of the expectancy terms. The

purpose of these questions was to gather information about how men and women interpret ambiguous items or words. Based on the limitations imposed by survey research and multiple choice response formats, it was still necessary for participants to respond to specific sentences and phrases that could be interpreted in many different ways. As a result, gender differences in the interpretation of these phrases (e.g., “sexual attention”) may have been overlooked or important information could have been missing from the survey entirely. It would be useful for future studies to use other methods of data collection such as open-ended questions or interviews as a way to gather a richer amount of information.

Another aspect of the data collection that might have obscured gender differences was the explicit nature of the expectancy items. Efforts were made through pilot work to prevent the items from appearing to be “male items” or “female items.” Despite these efforts, items may have been viewed as more appropriate for one gender or the other (e.g., sexual items and men) and responded to accordingly. Future research could use implicit tasks to reduce the likelihood that participants would respond in a gender-expected manner. Implicit measures also provide a way to examine how expectancy information is organized and whether the organization of such information differs by gender. For example, a sorting task could be used to investigate gender differences in the organization of bar-related expectancy information.

### *Conclusion.*

Studying gender differences in expectancies is very difficult and the past research does not offer a clear pattern of differences that studies can use as a starting point. Although the current study attempted to include issues infrequently addressed by past

research (e.g., context-specific items), few differences were found and many questions remain. Preliminary evidence from this study suggests that context and meaning of items may be important to illuminate subtle differences in beliefs, especially sexually-related beliefs, between men and women; however, it was and is a complicated task to translate these variables into methodology. For example, researchers are bound by language in constructing their items, and language, by nature, is ambiguous and open to interpretation. In addition, people may not be completely aware of their beliefs, motivations, or actions. It is difficult for someone to translate these aspects into specific responses to survey items and this task is made more difficult as the person is bound by the researcher's choice of language and other aspects of the items<sup>3</sup>. The methodologies that best allow researchers to investigate meaning of responses (e.g., interviews, conducting the study in a closer approximation of a drinking context) impose their own limits (e.g., time and resources used, sample size).

These challenges do not mean that researchers should give up studying gender differences in expectancies. Men and women differ in their pattern of alcohol consumption and the consequences that result from alcohol consumption including such severe outcomes as fights, drunk driving accidents, and sexual assault. Further study of context-specific expectancies related to these consequences (e.g., aggression or sexual expectancies) would aid in understanding the process of these outcomes and ways to intervene to reduce such consequences. Therefore, it is important to continue to study differences between men and women while attending to issues of methodology and

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<sup>3</sup> Researchers who study “context effects” have long acknowledged that aspects of items, such as response format, item order, and the use of ambiguous terms, influence responses to items on questionnaires (see Schwarz, 1999, for a review).

acknowledging limitations.

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## Appendices

### *Appendix A: Bar Context*

It is about 11 pm on a Friday night and you are entering a crowded bar to meet a group of your friends. It is a relief to walk into the bar from the humid outdoors. You have had a long hard week and you have been looking forward to this occasion. As your eyes adjust to the light you can see attractive and interesting people walking around the bar. They stand in small groups, laughing and talking to each other. Inside the bar, it is smoky and smells like beer. The air is warm and you feel someone brush by you as they head toward the bar. There is good music playing and you can hear people talking loudly over it. You can feel the beat of the music and can see some people dancing. To your right, you can see your friends standing in a corner. They are holding a couple of drinks. Your friends wave at you and call out your name over the music. They are friends that you have had a lot of fun with in the past. One friend walks toward you and asks what you would like from the bar.



*Appendix B: Bar-Specific Expectancy Questionnaire (by item group)*

*Sexual Activity expectancy items (SA)*

- SA 1. Alcohol makes it more likely that I will meet someone with whom I can share a sexual experience.
- SA 2. Having a few drinks of alcohol makes it more likely that I will share an exciting sexual experience with someone.
- SA 3. When I am drinking, I am more likely to hook up with someone.
- SA 4. After a few drinks, I am more likely to have a sexual experience with someone whose appearance is not the most appealing.
- SA 5. After a few drinks, I am more likely to seek out someone for a sexual relationship.

*Attention expectancy items (Att.)*

- Att 1. When I drink, I get a lot of sexual attention from others.
- Att 2. When I am drinking, I can get my choice of potential sexual partners.
- Att 3. When I am drinking alcohol, I feel good about the way that people notice me.
- Att 4. I feel more comfortable getting attention after I've had a few drinks.
- Att 5. After a few drinks of alcohol, I am more likely to receive sexual attention from others.

*Tension Reduction expectancy items (TR)*

- TR 1. When I feel anxious, drinking alcohol helps me to relax.
- TR 2. Alcohol makes me worry less. (AEQ)
- TR 3. When I am feeling stressed, a few drinks help me to relax.
- TR 4. If I am feeling restricted in any way, a few drinks make me feel better. (AEQ)
- TR 5. If I am tense or anxious, having a few drinks makes me feel better. (AEQ)

*Social expectancy items (Soc)*

- Soc 1. After a few drinks of alcohol, I am more outgoing.
- Soc 2. A few drinks make me feel less shy. (AEQ)
- Soc 3. Drinking gives me more confidence in myself. (AEQ)
- Soc 4. I am more social after I have had a few drinks of alcohol.
- Soc 5. Drinking alcohol makes it easier to talk to people.

*Note:* Items followed by (AEQ) have been taken from the Alcohol Expectancy Questionnaire (Brown *et al.*, 1980)

*Appendix C: Bar-Specific Expectancy Questionnaire (Context condition)*

Please continue to think about the situation you just imagined as you respond to the following statements. Read each statement carefully and respond to it using the following scale:

0	1	2	3	4	5
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

Make sure that you read each item *carefully* and *respond to it as if you are in the situation that you just heard*.

1. When I feel anxious, drinking alcohol helps me to relax.
2. When I drink, I get a lot of sexual attention from others.
3. After a few drinks of alcohol, I am more outgoing.
4. Alcohol makes it more likely that I will meet someone with whom I can share a sexual experience.
5. A few drinks make me feel less shy.
6. Alcohol makes me worry less.
7. When I am drinking, I can get my choice of potential sexual partners.
8. Drinking gives me more confidence in myself.
9. When I am feeling stressed, a few drinks help me to relax.
10. When I am drinking alcohol, I feel good about the way that people notice me.
11. Having a few drinks of alcohol makes it more likely that I will share an exciting sexual experience with someone.
12. If I am feeling restricted in any way, a few drinks make me feel better.
13. I feel more comfortable getting attention after I've had a few drinks.
14. I am more social after I have had a few drinks of alcohol.
15. When I am drinking, I am more likely to hook up with someone.
16. Drinking alcohol makes it easier to talk to people.
17. After a few drinks, I am more likely to have a sexual experience with someone whose appearance is *not* the most appealing.
18. If I am tense or anxious, having a few drinks makes me feel better.
19. After a few drinks of alcohol, I am more likely to receive sexual attention from others.
20. After a few drinks, I am more likely to seek out someone for a sexual relationship.

*Appendix D: Bar-Specific Expectancy Questionnaire (No Context condition)*

Please respond to each the following statements. Read each statement carefully and respond to it using the following scale:

0	1	2	3	4	5
Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree

Make sure that you read each item *carefully*.

1. When I feel anxious, drinking alcohol helps me to relax.
2. When I drink, I get a lot of sexual attention from others.
3. After a few drinks of alcohol, I am more outgoing.
4. Alcohol makes it more likely that I will meet someone with whom I can share a sexual experience.
5. A few drinks make me feel less shy.
6. Alcohol makes me worry less.
7. When I am drinking, I can get my choice of potential sexual partners.
8. Drinking gives me more confidence in myself.
9. When I am feeling stressed, a few drinks help me to relax.
10. When I am drinking alcohol, I feel good about the way that people notice me.
11. Having a few drinks of alcohol makes it more likely that I will share an exciting sexual experience with someone.
12. If I am feeling restricted in any way, a few drinks make me feel better.
13. I feel more comfortable getting attention after I've had a few drinks.
14. I am more social after I have had a few drinks of alcohol.
15. When I am drinking, I am more likely to hook up with someone.
16. Drinking alcohol makes it easier to talk to people.
17. After a few drinks, I am more likely to have a sexual experience with someone whose appearance is *not* the most appealing.
18. If I am tense or anxious, having a few drinks makes me feel better.
19. After a few drinks of alcohol, I am more likely to receive sexual attention from others.
20. After a few drinks, I am more likely to seek out someone for a sexual relationship.

*Appendix E: Evaluation of Bar-Specific Expectancy Questionnaire (Context condition)*

Please continue to think about the situation that you were asked to imagine as you respond to the following statements. Decide whether the sentence describes a behavior that is a *positive (desirable, pleasant)* effect of alcohol or *anegative (undesirable, unpleasant)* effect of alcohol **in that situation**. Read each statement carefully and respond to it using the following scale:

0	1	2	3	4	5
Completely Negative	Negative	Slightly Negative	Slightly Positive	Positive	Completely Positive

Read each item *carefully* and **respond to it as if you were in the situation that you imagined**.

21. When I feel anxious, drinking alcohol helps me to relax.
22. When I drink, I get a lot of sexual attention from others.
23. After a few drinks of alcohol, I am more outgoing.
24. Alcohol makes it more likely that I will meet someone with whom I can share a sexual experience.
25. A few drinks make me feel less shy.
26. Alcohol makes me worry less.
27. When I am drinking, I can get my choice of potential sexual partners.
28. Drinking gives me more confidence in myself.
29. When I am feeling stressed, a few drinks help me to relax.
30. When I am drinking alcohol, I feel good about the way that people notice me.
31. Having a few drinks of alcohol makes it more likely that I will share an exciting sexual experience with someone.
32. If I am feeling restricted in any way, a few drinks make me feel better.
33. I feel more comfortable getting attention after I've had a few drinks.
34. I am more social after I have had a few drinks of alcohol.
35. When I am drinking, I am more likely to hook up with someone.
36. Drinking alcohol makes it easier to talk to people.
37. After a few drinks, I am more likely to have a sexual experience with someone whose appearance is *not* the most appealing.
38. If I am tense or anxious, having a few drinks makes me feel better.
39. After a few drinks of alcohol, I am more likely to receive sexual attention from others.
40. After a few drinks, I am more likely to seek out someone for a sexual relationship.

*Appendix F: Evaluation of Bar-Specific Expectancy Questionnaire (No Context condition)*

Please respond to the following statements. Decide whether the sentence describes a behavior that is a *positive (desirable, pleasant)* effect of alcohol or a *negative (undesirable, unpleasant)* effect of alcohol. Read each statement carefully and respond to it using the following scale:

0	1	2	3	4	5
Completely Negative	Negative	Slightly Negative	Slightly Positive	Positive	Completely Positive

Make sure that you read each item *carefully*.

21. When I feel anxious, drinking alcohol helps me to relax.
22. When I drink, I get a lot of sexual attention from others.
23. After a few drinks of alcohol, I am more outgoing.
24. Alcohol makes it more likely that I will meet someone with whom I can share a sexual experience.
25. A few drinks make me feel less shy.
26. Alcohol makes me worry less.
27. When I am drinking, I can get my choice of potential sexual partners.
28. Drinking gives me more confidence in myself.
29. When I am feeling stressed, a few drinks help me to relax.
30. When I am drinking alcohol, I feel good about the way that people notice me.
31. Having a few drinks of alcohol makes it more likely that I will share an exciting sexual experience with someone.
32. If I am feeling restricted in any way, a few drinks make me feel better.
33. I feel more comfortable getting attention after I've had a few drinks.
34. I am more social after I have had a few drinks of alcohol.
35. When I am drinking, I am more likely to hook up with someone.
36. Drinking alcohol makes it easier to talk to people.
37. After a few drinks, I am more likely to have a sexual experience with someone whose appearance is *not* the most appealing.
38. If I am tense or anxious, having a few drinks makes me feel better.
39. After a few drinks of alcohol, I am more likely to receive sexual attention from others.
40. After a few drinks, I am more likely to seek out someone for a sexual relationship.

*Appendix G: Context Used to Respond to Expectancy Items (both conditions)*

Below you will find the same items that you just completed. Think about how you answered the items – what type of alcohol situation did you imagine yourself to be in when you answered each item? Please use the list of locations below to answer this question for each item: *“When I responded to this statement, I imagined myself to be drinking alcohol...”*

- 0 = At home, alone
- 1 = In a house with other people
- 2 = On a casual date
- 3 = With a significant other
- 4 = At a family celebration
- 5 = At a bar or dance club
- 6 = At a party
- 7 = In a restaurant
- 8 = At a sporting event
- 9 = Other

**“When I responded to this statement, I imagined myself to be drinking alcohol...”**

- 41. When I feel anxious, drinking alcohol helps me to relax.
- 42. When I drink, I get a lot of sexual attention from others.
- 43. After a few drinks of alcohol, I am more outgoing.
- 44. Alcohol makes it more likely that I will meet someone with whom I can share a sexual experience.
- 45. A few drinks make me feel less shy.
- 46. Alcohol makes me worry less.
- 47. When I am drinking, I can get my choice of potential sexual partners.
- 48. Drinking gives me more confidence in myself.
- 49. When I am feeling stressed, a few drinks help me to relax.
- 50. When I am drinking alcohol, I feel good about the way that people notice me.
- 51. Having a few drinks of alcohol makes it more likely that I will share an exciting sexual experience with someone.
- 52. If I am feeling restricted in any way, a few drinks make me feel better.
- 53. I feel more comfortable getting attention after I’ve had a few drinks.
- 54. I am more social after I have had a few drinks of alcohol.
- 55. When I am drinking, I am more likely to hook up with someone.
- 56. Drinking alcohol makes it easier to talk to people.
- 57. After a few drinks, I am more likely to have a sexual experience with someone whose appearance is *not* the most appealing.
- 58. If I am tense or anxious, having a few drinks makes me feel better.
- 59. After a few drinks of alcohol, I am more likely to receive sexual attention from others.
- 60. After a few drinks, I am more likely to seek out someone for a sexual relationship.

*Appendix H: Zuckerman-Kuhlman Personality Questionnaire– Sensation Seeking subscale*

On this page you will find a series of statements that persons might use to describe themselves. Read each statement and decide whether or not it describes you. Then indicate your answer on the answer sheet provided.

If you agree with a statement or decide that it describes you, answer **TRUE** by blackening in the 1 on the answer sheet. If you disagree with a statement, or feel that it is not descriptive of you, answer **FALSE** by blackening in the 0 on the answer sheet.

Please **answer each statement** either False (0) or True (1), even if you are not entirely sure of your answer.

**0 = False**

**1 = True**

61. I like to have new and exciting experiences and sensations even if they are a little frightening.
62. I would like to take off on a trip with no preplanned or defined routes or timetables.
63. I like doing things just for the thrill of it.
64. I tend to change interests frequently.
65. I sometimes like to do things that are a little frightening.
66. I'll try anything once.
67. I would like the kind of life where one is on the move and traveling a lot, with lot of change and excitement.
68. I sometimes do "crazy" things just for fun.
69. I like to explore a strange city or section of town by myself, even if it means getting lost.
70. I prefer friends who are excitingly unpredictable.
71. I like "wild" uninhibited parties.

*Appendix I: Demographic and drinking information questions*

72. What is your gender?

- (0) Female
- (1) Male

73. What is your current age?

- |                     |                 |
|---------------------|-----------------|
| (0) Younger than 18 | (5) 22          |
| (1) 18              | (6) 23          |
| (2) 19              | (7) 24          |
| (3) 20              | (8) 25          |
| (4) 21              | (9) 26 or older |

74. What is your race / ethnicity?

- (0) Caucasian / White, non-Hispanic
- (1) African – American / Black
- (2) Asian – American / Asian
- (3) Latino/a / Hispanic
- (4) Native American
- (5) Other

75. What is your sexual orientation?

- (0) Heterosexual
- (1) Bisexual
- (2) Homosexual

76. Which statement best describes your current relationship status?

- (0) Married or living with significant other
- (1) In a long-term relationship (but not living together)
- (2) Casually dating one person
- (3) Casually dating more than one person
- (4) Not dating / not currently in a relationship



*Appendix I (Continued)*

77. Over the past **12 months** , how many partners have you had with whom you have engaged in sexual intercourse?

- |                |                        |
|----------------|------------------------|
| (0) 0 partners | (5) 5 partners         |
| (1) 1 partner  | (6) 6 partners         |
| (2) 2 partners | (7) 7 partners         |
| (3) 3 partners | (8) 8 partners         |
| (4) 4 partners | (9) 9 or more partners |

78. When you engage in sexual activity / intercourse, how frequently does it occur with a **steady partner** and how frequently does it occur with **someone other than a steady partner**?

- (0) I have never engaged in sexual activity
- (1) 100% of the time with a steady partner - 0% with someone other than a steady partner
- (2) 75% of the time with a steady partner - 25% with someone other than a steady partner
- (3) 50% of the time with a steady partner – 50% with someone other than a steady partner
- (4) 25% of the time with a steady partner – 75% with someone other than a steady partner
- (5) 0% of the time with a steady partner – 100% with someone other than a steady partner

79. Which of the following best describes how often you usually drink alcohol?

- (0) I have never had a drink of alcohol *or*  
I drank alcohol in the past, but do not drink anymore
- (1) I drink alcohol 1, 2, or 3 times a year
- (2) I drink alcohol 4 or 5 times a year
- (3) I drink alcohol about once a month
- (4) I drink alcohol 2 or 3 days a month
- (5) I drink alcohol 1 day a week
- (6) I drink alcohol 2 days a week
- (7) I drink alcohol 3 or 4 days a week
- (8) I drink alcohol 5 or 6 days a week
- (9) I drink alcohol every day

*Appendix I (Continued)*

80. Which of the following best describes how much alcohol you usually drink at one time? By “a drink” we mean one **can or bottle of beer**, one **glass of wine or wine cooler**, one **shot of liquor**, or one **mixed drink with liquor in it**. (*Circle only one number*)

- (0) I don't drink alcohol
- (1) 1 drink
- (2) 2 drinks
- (3) 3 drinks
- (4) 4 drinks
- (5) 5 drinks
- (6) 6 to 8 drinks
- (7) 9 to 12 drinks
- (8) 13 to 16 drinks
- (9) 17 or more drinks

81. Which of the following is true for you?

- (0) I have never been drunk *or*  
I have been drunk in the past, but do not get drunk anymore
- (1) I get drunk 1, 2 or 3 times a year
- (2) I get drunk 4 or 5 times a year
- (3) I get drunk about once a month
- (4) I get drunk 2 or 3 days a month
- (5) I get drunk 1 day a week
- (6) I get drunk 2 days a week
- (7) I get drunk 3 or 4 days a week
- (8) I get drunk 5 or 6 days a week
- (9) I get drunk every day

**PLEASE TURN TO THE NEXT PAGE TO CONTINUE →**

*Appendix J: Frequency of alcohol consumption by location.*

How often do you consume alcohol in the following locations? Please fill in the number that best describes your behavior. Use the following scale to answer questions 82-92:

0 = I don't drink alcohol

1 = Although I drink alcohol, I **never** drink in this location

2 = I drink in this location once a year or less

3 = I drink in this location 3 or 4 times a year

4 = I drink in this location about once a month

5 = I drink in this location 2 or 3 times a month

6 = I drink in this location 1 day a week

7 = I drink in this location 2 days a week

8 = I drink in this location 3 or 4 days a week

9 = I drink in this location 5, 6, or 7 days a week

82. At home, alone

83. At home, with other people

84. At someone else's house (friends or significant other)

85. At your parents' house

86. At family celebrations or family holidays

87. At a bar or dance club

88. At parties

89. In restaurants

90. At sporting events

91. At concerts

92. Outdoors (camping grounds, parks, etc)

**PLEASE TURN TO THE NEXT PAGE TO CONTINUE →**

*Appendix K: Bar-specific Alcohol consumption.*

93. When you go to **bars and/or clubs**, how often do you consume at least one drink of alcohol?

- (0) I never go to bars or clubs
- (1) 0% of the time (I *never* drink alcohol when I go to a bar or club)
- (2) 10% of the time
- (3) 25% of the time
- (4) 40% of the time
- (5) 50% of the time (I consume alcohol about *half the time*)
- (6) 60% of the time
- (7) 75% of the time
- (8) 90% of the time
- (9) 100% of the time (I consume alcohol *every time* I go to a bar or club)

94. When you go to **bars and/or clubs AND consume alcohol**, which of the following best describes the number of drinks you consume on a typical night?

- (0) I don't go to bars or clubs
- (1) I don't consume alcohol when I go to bars or clubs
- (2) 1 drink
- (3) 2 drinks
- (4) 3 drinks
- (5) 4 to 5 drinks
- (6) 6 to 8 drinks
- (7) 9 to 12 drinks
- (8) 13 to 16 drinks
- (9) 17 or more drinks

**PLEASE TURN TO THE NEXT PAGE TO CONTINUE →**

*Appendix L: Definition of expectancy terms.*

The next questions will ask you to define words from some of the first items you saw. These are words or phrases that may be defined in different ways by different people. Please respond to each possible definition using the following options:

**0 = No, this activity is NOT included in my definition**

**1 = Yes, this activity is included in my definition**

**“When I drink, I get a lot of *attention* from members of the opposite sex.”**

When you think about this item, what does “attention” mean to you?

95. Someone looking at me

96. Someone making a verbal comment about me

97. Someone buying a drink for me

98. Someone touching me (brush against me or touch my arm, back, or leg)

99. Someone approaching me

100. Someone talking to me

101. Someone asking for my phone number

102. Someone kissing me

**“When I am drinking, I am more likely to *hook up* with someone.”**

When you think about this item, what does the term “hook up” mean to you?

**0 = No, this activity is NOT included in my definition**

**1 = Yes, this activity is included in my definition**

103. Talking

104. Being asked for my phone number

105. Being asked out on a date

106. Flirting

107. Touching (brush against me or touch my arm, back, or leg)

108. Kissing

109. Sexual activity (that does not include oral sex or sexual intercourse)

110. Oral sex

111. Sexual intercourse

**PLEASE TURN TO THE NEXT PAGE TO CONTINUE →**

*Appendix M: Facts about bar context (Context condition).*

The next few pages will ask questions about the bar situation you were asked to imagine near the beginning of the study. Please think about the situation in as much detail as you can while you answer the next set of questions. The first three questions will ask you to remember information that was provided about the situation.

112. In the situation, what day and time was it?

- (0) Thursday night, 8 pm
- (1) Friday night, 11 pm
- (2) Late Saturday night, 1 am

113. Were people dancing in the bar?

- (0) Yes
- (1) No

114. Where in the bar were your friends?

- (0) Sitting at a table
- (1) Dancing
- (2) Standing in a corner

**PLEASE TURN TO THE NEXT PAGE TO CONTINUE →**

*Appendix N: Realism of bar context (Context condition).*

Please continue to think about the bar situation that you imagined as you answer the next set of questions. These three questions will ask you about the situation in general.

115. How realistic was the bar situation?

- (0) Not at all realistic
- (1) Somewhat realistic
- (2) Very realistic

116. Do you go to bars that are similar to the one in the situation?

- (0) No, I do not go to any bars
- (1) No, The bars I go to are very different from this one
- (2) Yes, I sometimes go to bars that are similar to this one
- (3) Yes, I often go to bars that are similar to this one

117. How much did you use the situation that you imagined to answer the items presented after it?

- (0) I *didn't* use the situation *at all* when I was answering the items
- (1) I used the situation *a little bit* when I was answering the items
- (2) I used the situation *somewhat* when I was answering the items
- (3) I used the situation *very much* when I was answering the items

**THANK YOU FOR PARTICIPATING IN THIS STUDY!**

## Social Sciences/Behavioral Adult Informed Consent

University of South Florida

### Information for People Who Take Part in Research Studies

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The following information is being presented to help you decide whether or not you want to be a part of a minimal risk research study. Please read carefully. If you do not understand anything, ask the Person in Charge of the Study.

<b>Title of Study:</b>	College Students' Beliefs about Alcohol Consumption
<b>Principal Investigator:</b>	Andrea H. Weinberger, M.A.
<b>Study Location(s):</b>	USF

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You are being asked to participate in this study because you are a college student.

#### General Information about the Research Study

The purpose of this research study is to investigate beliefs about alcohol consumption held by college students.

#### Plan of Study

- You understand that you will receive a questionnaire in which you will be asked to answer questions regarding your beliefs about drinking alcohol. In addition, you will be asked to provide general demographic information as well as information about your pattern of alcohol consumption. *You do not need to consume alcohol to participate in this study.* Some of the questions you will be asked will be sensitive and personal in nature. You are free to decline to answer or leave blank any questions on the questionnaire without penalty (entry into the cash lottery or loss of extra credit points to which you are entitled). This study will take approximately 40 minutes to complete.  
Please note that we will be asking about several different behaviors in which young adults may participate. We do not wish to convey endorsement of any behaviors of which we ask. Our purpose is to collect the more accurate data possible; therefore, we ask that you provide honest information. Because we need accurate reports, we assure you that the information you provide is strictly confidential.
- Payment for Participation  
To compensate you for the time that you will devote to this study, you may receive a maximum of 2 extra credit points that you can apply toward applicable psychology courses. If you are not enrolled in a psychology class, you may receive 1 entry into a cash lottery. If you elect to withdraw before the study is completed, you will not be penalized by loss of extra credit points or lottery entry.



*Appendix O (Continued)*

**Benefits of Being a Part of this Research Study**

- By taking part in this study, you may increase your overall knowledge about your own beliefs about and motives for drinking alcohol. If you do not consume alcohol, you may become more aware of the possible motives of others who do consume alcohol. In addition, there will be potential benefits to others regarding research into the reasons that college-aged men and women consume alcohol.

**Risks of Being a Part of this Research Study**

- You may experience feelings of anxiety or heightened awareness / insight into your own behavior during this study. If you experience such feelings, please inform the investigator and a referral to a health provider will be made.

**Confidentiality of Your Records**

- Your privacy and research records will be kept confidential to the extent of the law. Confidentiality of records will be maintained by using only code numbers to identify your data. *Your name will not be associated with the data in any way.* In addition, only the Principle Investigator and her assistants will have access to the data. Records will be kept secure in a research laboratory. Only valid personnel have access to the laboratory and the lab is kept locked to prevent access by unauthorized personnel.

Authorized research personnel, employees of the Department of Health and Human Services and the USF Institutional Review Board may inspect the records from this research project.

The results of this study may be published. However, the data obtained from you will be combined with data from other people in the publication. The published results will not include your name or any other information that would in any way personally identify you.

**Volunteering to Be Part of this Research Study**

- Your decision to participate in this research study is completely voluntary. You are free to participate in this research study or to withdraw at any time. If you choose not to participate, or if you withdraw, there will be no penalty or loss of extra credit points that you are entitled to receive.

**Questions and Contacts**

- If you have any questions about this research study, contact Andrea Weinberger at (813) 974-6963.
- If you have questions about your rights as a person who is taking part in a research study, you may contact a member of the Division of Research Compliance of the University of South Florida at 813-974-5638.

**Please continue by turning to the next page.**

*Appendix O (Continued)*

**Your Consent—By signing this form I agree that:**

- I have fully read or have had read and explained to me this informed consent form describing a research project.
- I have had the opportunity to question one of the persons in charge of this research and have received satisfactory answers.
- I understand that I am being asked to participate in research. I understand the risks and benefits, and I freely give my consent to participate in the research project outlined in this form, under the conditions indicated in it.
- I have been given a signed copy of this informed consent form, which is mine to keep.

_____ Signature of Participant	_____ Printed Name of Participant	_____ Date
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**Investigator Statement**

I have carefully explained to the subject the nature of the above protocol. I hereby certify that to the best of my knowledge the subject signing this consent form understands the nature, demands, risks and benefits involved in participating in this study.

_____ Signature of Investigator Or Authorized research investigators designated by the Principal Investigator	_____ Printed Name of Investigator	_____ Date
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**Institutional Approval of Study and Informed Consent**

This research project/study and informed consent form were reviewed and approved by the University of South Florida Institutional Review Board for the protection of human subjects. This approval is valid until the date provided below. The board may be contacted at (813) 974-5638.

**Approval Consent Form Expiration Date:**

**Revision Date:** \_\_\_\_\_

*Appendix P: Directions for imaginal task.*

“The first part of the questionnaire involves your imagination. You will be asked to imagine a scene that will be played to you on a cassette recorder. During the scene, you will be asked to close your eyes and visualize the scene as best as you can. Please do not talk or laugh during this study – that will make it harder for the others to concentrate. To give you a feel for what we want you to do, we will start with a ‘practice’ scene.

“Please close your eyes now and concentrate on the scene.

“You are alone on one of your favorite beaches. It is a sunny afternoon. As you stand on the beach you can feel the warm sand under your bare feet. Now you are sitting down on the sand and looking out over the horizon. There is water as far as you can see. The sky is perfectly clear and deeply blue. The sun is beating on your skin and making you feel warm. At the same time, a cool breeze blows to cool you off. The only sounds you can hear are the rhythmic beating of the surf and an occasional bird. You are completely removed from society. As you look around all you can see is white sand, water, a few birds, and blue sky. Now you close your eyes and lie back. You are concentrating on the sounds of the surf and the birds flying overhead. You are also concentrating on the feeling of the sun warming your skin. Even though your eyes are closed, you can still see the pinkish light from the sun shining through your eyelids. You are feeling the warm, gritty feeling of the sand under your body and the soft breeze cooling you off. Nothing is bothering you; you are feeling very relaxed.

*Appendix P (Continued)*

“Now you will be presented with another scene. Again, you will be asked to close your eyes and visualize the scene as best as you can. After the scene, you will respond to some statements about how you expect alcohol to affect you *in the specific situation* described in the scene. If you would not drink in that situation, respond according to how you think alcohol would affect you if you *did* drink in that situation. In the situation, you have not had any alcohol beforehand.

“Please close your eyes now and imagine the scene.”

## EDUCATIONAL SUMMARY

People hold different beliefs about the effects of alcohol (drunk, dizzy, outgoing, sexually aroused, etc.). Specific beliefs that a person holds may depend on characteristics of that person including their level of drinking (heavier vs. lighter), age, gender, and ethnicity. Although a lot of research has been conducted on expectancies in general, only a few studies have investigated how expectancies differ by drinking situation. However, expectancies may be different in different drinking situations (drinking in a bar vs. drinking at dinner on a date vs. drinking at home, alone).

The purpose of this study was to investigate alcohol expectancies when a specific location is provided (a bar setting) versus when no context is specified. A bar setting was chosen as the context because it is a popular place for college students to drink and the amount of alcohol and large number of people present (known and unknown) may result in negative consequences such as drunk driving, fights, and sexual assault. It is expected that there will be differences in expectancies when students are asked to imagine themselves in a bar situation then when they are not given instructions regarding drinking context.

This study may have led you to examine your drinking habits in a new or different way. You might have become more aware of your level of drinking as well as the consequences and problems that are related to your alcohol consumption. It might have also brought up other situations or issues related to the topic of alcohol consumption that could cause you distress. If you have questions or concerns about your own drinking habits or need to discuss any other related topic (such as negative experiences in bars), please contact the **Counseling Center for Human Development at 974-2831** or the **Center for Addiction and Substance Abuse at 974-2677**. Services available for students at the University of South Florida include personal counseling, and evaluation and treatment for individuals abusing or addicted to alcohol or other drugs. These services are confidential and free for all USF students.

### About the Author

Andrea H. Weinberger grew up in Pittsburgh, Pennsylvania and received a Bachelor's Degree in Psychology from the University of Michigan in 1995. She earned her Master's Degree in Psychology from Connecticut College in 1997 where her thesis received the Otello Desiderato Prize for Most Distinguished M.A. Thesis in Psychology.

Ms. Weinberger entered the Clinical Psychology Ph.D. program at the University of South Florida in 1997. She conducted research on alcohol expectancies with Mark Goldman, Ph.D. and colleagues at the Alcohol and Substance Use Research Institute. She also served as Executive Officer of the Student Diversity Committee and the coordinator for the Center for Alcohol and Substance Abuse programs at USF's Counseling Center.

Ms. Weinberger completed her predoctoral internship at the Hartford Consortium. She looks forward to continuing her training through her postdoctoral fellowship with the PRISM Research Program at The Connecticut Mental Health Center and Yale University School of Medicine.