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SEX-RELATED ALCOHOL EXPECTANCIES, ALCOHOL CONSUMPTION, AND  
RISKY SEXUAL BEHAVIOR AMONG AFRICAN AMERICAN COLLEGE WOMEN

by

Danielle Patrice Frilot Cottonham

A Thesis  
Submitted to the Graduate School  
and the Department of Psychology  
at The University of Southern Mississippi  
in Partial Fulfillment of the Requirements  
for the Degree of Master of Arts

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May 2016

## ABSTRACT

### SEX-RELATED ALCOHOL EXPECTANCIES, ALCOHOL CONSUMPTION, AND RISKY SEXUAL BEHAVIOR AMONG AFRICAN AMERICAN COLLEGE WOMEN

by Danielle Patrice Frilot Cottonham

May 2016

African American college women are experiencing sex-related negative consequences (e.g., contracting sexually transmitted diseases or human immunodeficiency virus, having an unplanned pregnancy) at disproportionate rates in comparison to Caucasian college women. Furthermore, African American college women are likely engaging in risky sexual behaviors (e.g., unprotected anal, vaginal, oral sex) that may be placing them at a greater risk for experiencing sex-related negative consequences. Research suggests that increased alcohol consumption is predictive of more risky sexual behavior among college women. Additionally, sex-related alcohol expectancies, or beliefs about the effects of alcohol on sexual behavior, are positively associated with increased alcohol consumption and risky sexual behavior and therefore, may attenuate the association alcohol use has with risky sexual behaviors among African American college women. Because of the underrepresentation of African American college women in research examining the aforementioned factors, the purpose of the present study was to examine the link between sex-related alcohol expectancies (i.e., enhancement, sexual risk taking, disinhibition), alcohol consumption, and risky sexual behaviors exclusively among a sample of African American college women at a mid-sized Southern university. Multiple and hierarchical linear regression analyses yielded the following results: (a) enhancement sex-related alcohol expectancies predicted increased

risky sexual behavior, (b) sex-related alcohol expectancies did not predict increased alcohol consumption and (c) did not moderate the relationship between alcohol consumption and risky sexual behaviors. Clinical and research implications will be discussed.

## ACKNOWLEDGMENTS

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## CHAPTER I

### INTRODUCTION

Sexual health among African American women is becoming an increasingly relevant area of public health (Painter, Wingood, DiClemente, DePadilla, & Simpson-Robinson, 2012; Alleyne & Gaston, 2010). To some degree, this is likely attributed to racial disparities in sex-related negative consequences (e.g., contracting human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS), contracting sexually transmitted diseases/sexually transmitted infections (STDs/STIs), and having an unplanned pregnancy (Buhi, Marhefka, & Hoban, 2010). In comparison to their Caucasian counterparts, African American women aged 18-25 are at a greater risk for experiencing sex-related negative consequences (Center for Disease Control and Prevention (CDC), 2014a; CDC, 2014b; Hamilton & Ventura, 2012; Alleyne & Gaston, 2010).

A related public health concern is alcohol consumption among traditional age college students (i.e., 18-25). The combination of alcohol use and sex can exacerbate the aforementioned sex-related negative consequences (National Institute on Alcohol Abuse and Alcoholism [NIAAA], 2013; Hingson, Zha, & Weitzman, 2009; Hingson, Heeren, Winter, & Wechsler, 2005). Individual beliefs about the effects of consuming alcohol on sexual behavior, or sex-related alcohol expectancies, are proximal predictors of alcohol-related risky sexual behavior (Benson, Gohm, & Gross, 2007). Stronger sex-related alcohol expectancies have been linked to increased alcohol consumption and a greater likelihood of engaging in risky sexual behaviors (Gilmore et al., 2013; Patrick & Maggs, 2009; White, Fleming, Catalano, & Bailey, 2009).



Although there is an established relationship between alcohol consumption and risky sexual behaviors, the nature of this relationship among African American college women needs to be better understood in order to address racial disparities in sex-related negative consequences. Although previous research has contributed to the understanding of between-group differences, identifying within-group differences related to variables that predict risky sexual behavior, such as alcohol consumption and sex-related alcohol expectancies, among African American college women will better inform culturally congruent prevention and intervention initiatives and spurn further research. Therefore, the purpose of the current study was to examine the effects of sex-related alcohol expectancies on the relationship between alcohol consumption and risky sexual behaviors among African American college women.

#### Sexual Health among African American Women

Racial disparities are evident in the rates of HIV, STDs and unplanned pregnancies among young adult women. The highest prevalence rates of syphilis, human papillomavirus (HPV), gonorrhea, and chlamydia are among women 20 to 24 years of age (CDC, 2014a). Among these women, African Americans have higher rates of STDs than Caucasians and contracted gonorrhea, chlamydia and syphilis at 11.1, 4.4 and 8 times the rate of Caucasian women respectively (CDC, 2014a).

The rates of African American women being diagnosed with HIV continue to rise despite increased attention on HIV prevention and treatment in recent years. African American women made up 64% of HIV diagnoses in 2011; however, only 12% of women in the United States were African American (CDC, 2011). Furthermore, African American women accounted for approximately 38.1% of new HIV infections in 2010

while Caucasian women made up only 1.9% (CDC, 2013). Of the new infections among women 13 to 24 years of age in 2010, African American women made up 1,400 of the new infections while Caucasian women made up 280 (CDC, 2014b). Although the number of young adult pregnancies is declining, the rate of unplanned pregnancies remains highest among African American women. In 2010, African American women made up 51.5% of young adult pregnancies while Caucasian women made up only 23.5% (Hamilton & Ventura, 2012).

Based on these statistics it is apparent that African American women of traditional college age (i.e., 18 to 24 years of age) are experiencing sex-related negative consequences at disproportionately high rates compared to other racial and ethnic groups. Racial disparities in sex-related negative consequences are closely associated with racial disparities found in socioeconomic structures, such as level of poverty, education, and employment status (Painter et al., 2012). Previous research has sought to examine sex-related negative consequences among young adult African American women. However, there is little research seeking to explore sex-related negative consequences among African American college women, leaving much of this phenomenon not fully understood among this particular group of African American women.

#### Sexual Behaviors among African American College Women

Compared to their Caucasian peers, African American college women may be more likely to experience sex-related negative consequences as a result of engaging in more risky sexual behaviors (Buhi et al., 2010). For instance, African American college women are less likely to use any method of birth control during their sexual experiences and are more likely to have contracted at least one STD or have an unplanned pregnancy

during an academic year than Caucasian college women (Buhi et al., 2010). Focusing on sexually active African American college women, Lewis, Melton, Succop and Rosenthal (2000) found that 38% of African American college women reported having had at least one STD diagnosis with lifetime diagnoses ranging from 0 to 6. Further, 41% reported having had an unplanned pregnancy and less than 25% reported that they consistently used condoms during sexual activity, with most participants reporting no condom use as normal sexual behavior (Lewis, Melton, Succop, & Rosenthal, 2000). Because sex-related negative consequences can have an adverse impact on health and education among African American college women, results such as these further support the need to address participation in risky sexual behaviors among African American college women.

Understanding risky sexual behaviors and sex-related negative consequences among African American college women is significant due to the association between sex-related negative consequences and academic success. Contracting a STD or having an unplanned pregnancy can be related to social, emotional, and financial stress that could negatively influence a woman's ability to continue her education (Buhi et al., 2010). Ensuring continued education for African American college women is especially important because of the significant relationship between educational level and susceptibility to contracting STDs and HIV among African American women 18 to 29 years of age. Specifically, having a college degree or greater has shown to be an important protective factor against sex-related negative consequences (Painter et al., 2012). Thus, providing culturally congruent prevention and intervention methods tailored to address risky sexual behaviors and sex-related negative consequences specifically among African American college women can help promote conscious decision making

and overall healthier lifestyle changes beyond sexual behaviors that may increase academic success.

Aspects that are unique to the college environment may place African American college women at an increased risk for experiencing sex-related negative consequences in comparison to the general population of college aged African American women. Alcohol consumption is a common behavior among college students and has also shown to be a proximal predictor of risky sexual behaviors among college women (NIAAA, 2013). However, little is known about these links among African American college women. Because African American college women are participating in drinking behaviors and experiencing sex-related negative consequences, it is important to understand the relationship between alcohol consumption and risky sexual behaviors among this specific group in order to promote culturally congruent preventions and interventions for African American college women.

#### Alcohol Consumption and Risky Sexual Behavior

Alcohol consumption has been linked to increased risky sexual behaviors among college students regardless of race (Moorer, Madson, Mohn, & Nicholson, 2014; Scott-Sheldon, Carey, & Carey, 2010; White et al., 2009; Brown & Venable, 2007). Nearly 50% of college students report engaging in risky sexual behaviors while under the influence of alcohol (Trepka et al., 2008). Additionally, college students report over 400,000 occurrences of unprotected sex under the influence of alcohol use annually (NIAAA, 2013). In part, this is because alcohol use (a) increases the likelihood of participating in sexual activity, (b) enhances the perception of sexual experiences through the belief that alcohol will disinhibit their sexual risk taking, which thus (c) increases the

possibility of participating specifically in risky sexual behavior (Cooper, 2006). A recent study found that when controlling for sensation seeking and risk taking, alcohol use uniquely predicted the intention to use or not use condoms during sexual activity (Rehm, Shield, Joharchi, & Shuper, 2012). Similarly, Dermen and Cooper (2000) found that when presented with the conflict between using a condom and not using a condom, individuals who do not report alcohol use are less likely to engage in unprotected sex than those who report alcohol use.

The relationship between alcohol use and risky sexual behaviors differs by gender. Although men tend to report consuming larger amounts of alcohol, women report more negative sex-related consequences and more risky sexual behavior after drinking (Patrick & Maggs, 2009). When comparing normative perceptions of consuming alcohol prior to sex, college women are more likely than college men to view drinking before sex as a normal behavior (Lewis, Litt, Crounce, Blayney, & Gilmore, 2014). Caldeira and colleagues (2009) found that among sexually active women in their first year of college, almost half reported having had sex without a condom, one third reported having multiple sexual partners, and the majority of college women reported having sex under the influence of alcohol (Caldeira et al., 2009). These authors also found that all three types of risky sexual behaviors persisted and increased during the second year of college (Calderia et al., 2009). It is evident that alcohol consumption is associated with more risky sexual behaviors and sex-related negative consequences for college women overall, but more evidence is needed to further understand alcohol consumption and risky sexual behaviors among African American college women. Understanding this relationship could be beneficial because African American college women are a group of women that

is at risk for experiencing sex-related negative consequences as a result of risky sexual behavior.

### Alcohol Consumption among African American College Women

#### *Alcohol and Gender*

Although the trend in alcohol consumption among male and female college students has remained relatively consistent over the past few decades, the gender gap is growing smaller with alcohol consumption among college women increasing. The closing of the gender gap is particularly evident in binge drinking. From 1998 to 2008, women showed an increase in rates of binge drinking, as while males showed a decrease (Johnston, O'Malley, Bachman, & Schulenberg, 2012; Johnston, O'Malley, Bachman, & Schulenberg, 2011). Hoepfner and colleagues (2013) found that when examining NIAAA drinking standards for college men and women, women were more likely to drink more than their recommended weekly limit for safe drinking (i.e., more than 7 drinks in a week) compared to men (i.e., more than 14 drinks in a week; Hoepfner, Paskausy, Jackson, & Barnett, 2013). Drinking habits differ not only by gender but also by race and ethnicity.

#### *Alcohol and Race*

African Americans typically consume less alcohol than Caucasians (Skidmore, Murphy, Martens, & Dennhardt, 2012) but may experience greater adverse effects. In examining racial and ethnic disparities in alcohol research, it was found that Native Americans, Hispanics, and African Americans are more negatively affected by drinking in comparison to other ethnic minority groups (Chartier & Caetano, 2010). For example, African Americans in particular have the highest rate of recurrent and persistent alcohol

dependence in comparison to Caucasians (Charter & Caetano, 2010). Furthermore, African Americans have reported more negative social consequences (e.g., unfair treatment and racial stigma) at lower and higher levels of alcohol consumption compared to both Hispanics and Caucasians (Mulia, Ye, Greenfield, & Zemore, 2009). Specifically, African American college students report curtailing their drinking behavior and alcohol consumption to avoid problems with campus police, being stereotyped or labeled as dangerous or abusers, and to maintain a level of respect from their Caucasian college peers (Peralta, 2010). African American college women in particular report more negative alcohol-related consequences (i.e., social interpersonal and physical dependence) in comparison to African American males (Skidmore et al., 2012). Previous findings highlight the importance of exploring alcohol consumption within specific groups in addition to between groups.

Comparison studies have established between-group differences among African Americans and Caucasians and alcohol consumption, but in doing so, many within-group nuisances are often missed. In order to better address disparities among African Americans by developing culturally congruent prevention and intervention efforts, it is necessary to look at alcohol consumption specifically among this group (Paves, Pedersen, Hummer, & LaBrie, 2012). Both gender and race have been found to play a role in the use of protective behavioral strategies, alcohol consumption, and the likelihood of experiencing alcohol-related negative consequences (Madson & Zeigler-Hill, 2013; Borsari, James, & Barnett, 2007). Additionally, Madson, Villarosa, Moorner, and Zeigler-Hill (2015) found unique relationships among drinking patterns, motives for drinking, and use of protective behavioral strategies that were not reflected in heterogeneous

samples, but were found when exclusively examining them among African American college students at a predominantly White institution. It is also important to acknowledge environmental influences when looking at within group differences. Previous research investigating alcohol consumption solely among African American college students is based on samples from Historically Black Colleges and Universities (HBCU), which may not be generalizable to African American students at predominantly White institutions. For example, Peralta (2010) found that African Americans in predominantly White institutions often avoid drinking in places perceived as occupied primarily by Caucasian students. Examining alcohol consumption among African American students attending predominantly White institutions will expand research, address unique differences within this group, and assist in understanding racial disparities in alcohol-related negative consequences.

Previous findings emphasize the importance of looking at alcohol consumption exclusively among African American college women. Although prior findings suggest that African American college women tend to engage in less high risk drinking (Siebert, Wilke, Delva, Smith, & Howell, 2003; O'Malley & Johnston, 2002), recent studies investigating high risk drinking activities such as pre-partying or pre-gaming (i.e., drinking that takes place prior to an event; Pedersen & LaBrie, 2007) among ethnic minority college students, found no differences in drinking behaviors between African American and Caucasian college women (Paves et al., 2012). Additionally, African American college women may report consuming less alcohol, but are at greater risks for experiencing sex-related negative consequences (Randolph, Torres, Gore-Felton, Lloyd, & McGarvey, 2009). Examining this phenomenon among African American college



women can aid in better understanding how alcohol consumption contributes to their high rate of experiencing sex-related negative consequences and engaging in risky sexual behaviors. It can also inform intervention and prevention methods on using approaches that are more culturally congruent.

### Sex-Related Alcohol Expectancies, Alcohol Consumption, and Risky Sexual Behaviors

It has been argued that alcohol consumption influences individuals not only through its direct physiological effects but also through an individual's expectancies or beliefs about the effects of alcohol (Zawacki, 2011). Alcohol expectancies are the degree to which an individual believes that alcohol will have positive (i.e., enhanced sexuality, increased sociability, tension reduction, liquid courage) and/or negative (i.e., hangover, physical impairments, blackouts) effects on their experiences (Patrick & Maggs, 2009; Fromme, Stroot, & Kaplan, 1993). Positive alcohol expectancies have been linked with higher rates of alcohol consumption among individuals of traditional college age as well as college students (Leigh & Stacy, 2004). The more positive alcohol expectancies an individual endorses, the more alcohol they are likely to consume in order to experience the desired effects (Iwamoto, Corbin, Lejuez, & MacPherson, 2013; Leigh & Stacy, 2004). Researchers have also found that among young adults, when more positive alcohol expectancies are endorsed, there is an increase in both alcohol consumption and risky sexual behaviors (e.g., multiple sexual partners; White et al., 2009). While much is understood about general positive alcohol expectancies, less is known about sex-related alcohol expectancies and the role they play in alcohol consumption and risky sexual behavior.

Sex-related alcohol expectancies are an individual's belief that their sexual experiences will be enhanced as a result of alcohol consumption (Benson et al., 2007). Risky sexual behavior is most likely associated with sex-related alcohol expectancies (Messman-Moore, Ward, & DeNardi, 2013; Derman & Cooper, 2000), which can be classified into three main categories: enhancement, sexual risk taking, and disinhibition (Iwamoto et al., 2013; White et al., 2009; Benson et al., 2007). According to Dermen and Cooper (1994), enhancement sex-related expectancies are beliefs that alcohol will make one's sexual experience more pleasurable (e.g., "After drinking alcohol, I will enjoy sex more"), sexual risk taking sex-related expectancies are beliefs that alcohol will increase the likelihood of engaging in risky sexual behaviors (e.g., "After drinking alcohol, I would be less likely to use a condom"), and disinhibition sex-related expectancies are ideas that alcohol will reduce one's awareness in sexual responding (e.g., "After drinking alcohol, I have sex with people whom I would not have sex with if I were sober").

Two prominent theories are often used to explain the relationship between sex-related alcohol expectancies, alcohol use, and sexual behaviors. First is the alcohol myopia theory (Steele & Josephs, 1990). According to this theory, a conflict occurs when a person is under the influence of alcohol and is presented with both positive (e.g., sexual attraction and arousal) and negative (e.g., contracting STDs or HIV) sexual cues (Lewis, Rees, Logan, Kaysen, & Kilmer, 2010). The way in which an individual rectifies this conflict is influenced by alcohol's affect on how information is cognitively processed (Lewis et al., 2010; Derman & Cooper, 2000). In other words, when under the influence of alcohol, positive sexual cues become salient and receive more attention than negative sexual cues (Lewis et al., 2010).

Although the alcohol myopia theory helps to describe the relationship between alcohol consumption and sexual behavior, the alcohol expectancy theory assists in explaining the role of sex-related alcohol expectancies. The alcohol expectancy theory proposes that the expectation that alcohol will have a positive effect on sexual behavior will likely result in greater desired sexual experiences when drinking (Brown, Goldman, Inn, & Anderson, 1980). Specifically, alcohol consumption should increase the likelihood of engaging in sexual behavior more so among individuals with stronger beliefs about alcohol's positive effect on sexual behavior than those with weaker beliefs (Gilmore et al., 2013). Using both the alcohol myopia theory and alcohol expectancy theory provides a better understanding of how the association between alcohol use and risky sexual behavior is influenced by sex-related alcohol expectancies.

There is little research investigating the three types of sex-related alcohol expectancies examined in the current study (i.e., enhancement, sexual risk taking, and disinhibition), alcohol use and risky sexual behavior among college women; however, Messman-Moore and colleagues (2013) found that increased levels of heavy episodic drinking, risky sexual behavior, and number of sexual partners were positively associated with greater endorsement of enhancement sex-related alcohol expectancies among a racially diverse sample of college women (Messman-Moore et al., 2013). When examining other sex-related outcomes that could influence the likelihood of engaging in risky sexual behavior such as sexual arousal and sexual desire among college women, disinhibition sex-related alcohol expectancies have been found to moderate the relationship between alcohol use and sexual arousal and sexual desire such that college women with stronger disinhibition expectancies have higher sexual arousal and desire

while under the influence of alcohol than those with weaker disinhibition expectancies (Gilmore et al., 2013).

Although previous research has looked at the relationship between sex-related alcohol expectancies, alcohol consumption and risky sexual behaviors, it is difficult to determine which type of sex-related alcohol expectancy is the best predictor of alcohol consumption and risky sexual behaviors. This could partially be due to the method used to measure sex-related alcohol expectancies. The enhancement or sexuality subscale of the Comprehensive Effects of Alcohol (CEOA; Fromme et al., 1993) questionnaire is typically used to assess sex-related alcohol expectancies. However, this sub-scale encompasses items that assess multiple types of the aforementioned sex-related alcohol expectancies such as enhancement and disinhibition. Thus, separating sex-related alcohol expectancies and measuring specific subtypes will contribute to a better understanding of the role of sex-related alcohol expectancies in the relationship between alcohol use and risky sexual behaviors among African American college women as well as potentially inform why this subgroup of college women are at a greater risk for experiencing sex-related negative consequences.

In regards to race and ethnicity, there is even less, if any, research that investigates racial differences in the relationship between sex-related alcohol expectancies, alcohol use, and risky sexual behavior among college women. Additionally, previous studies that have examined sex-related alcohol expectancies among college women consist of majority Caucasian samples. However, findings from a study examining enhancement, sexual risk taking, and disinhibition sex-related expectancies among sexually active adolescent men and women drinkers suggested that endorsement

of sex-related alcohol expectancies differs by race (Dermen & Cooper, 1994). Looking specifically at women, Caucasian adolescents were more likely than African American adolescents to strongly endorse sexual risk taking and disinhibition expectancies (Dermen & Cooper, 1994). Thus, demonstrated differences in predictors of harmful and safe alcohol use when examining within and between group differences at predominantly White institutions (Madson et al., 2015; Madson & Zeigler-Hill, 2013; Bosari et al., 2007) and racial differences in the endorsement of sex-related alcohol expectancies (Dermen & Cooper, 1994) support the importance of looking at this relationship exclusively among African American college women. Doing so can promote culturally congruent intervention and prevention methods as well as address a gap in the literature among African American college women.

#### Present Study

African American college women are experiencing sex-related negative consequences at alarming rates as a result of risky sexual behavior (CDC, 2014a; Alleyne & Gaston, 2010; Buhi et al., 2010). Because of this, it is important to further understand what factors are associated with an increased probability of African American college women engaging in risky sexual behaviors. Although previous research has established a strong relationship between alcohol consumption and risky sexual behaviors among college women (Moorer et al., 2014; Scott-Sheldon, Carey, & Carey, 2010; White et al., 2009; Brown & Vanable, 2007), most studies have had an underrepresentation of African American college women in their samples. Heterogeneous and comparison studies have provided valuable information, but within-group examination is needed in order to better explain and understand disparities in sex-related negative consequences among African

American college women and inform culturally congruent prevention and intervention efforts (Paves et al., 2012). The goal of the present study was to examine the link between sex-related alcohol expectancies, alcohol consumption, and risky sexual behaviors exclusively among a sample of traditional age African American college women at a predominately White institution in an effort to examine within group differences and inform prevention and invention efforts on college campuses through answering the following questions:

*Question 1:* To what degree do enhancement, sexual risk taking, and disinhibition sex-related alcohol expectancies predict risky sexual behaviors among African American female college drinkers?

*Hypothesis 1:* It is expected that increased enhancement, sexual risk taking, and disinhibition sex-related alcohol expectancies will predict more risky sexual behavior.

*Question 2:* To what degree do enhancement, sexual risk taking, and disinhibition sex-related alcohol expectancies predict alcohol consumption among African American female college drinkers?

*Hypothesis 2:* It is expected that increased enhancement, sexual risk taking, and disinhibition sex-related alcohol expectancies will predict more alcohol consumption.

*Question 3:* To what degree do enhancement, sexual risk taking, and disinhibition sex-related alcohol expectancies moderate the relationship between alcohol use and risky sexual behaviors among African American female college drinkers?

*Hypothesis 3a:* It is expected that enhancement will moderate the relationship between alcohol use and risky sexual behaviors such that stronger enhancement sex-related alcohol expectancies paired with increased alcohol consumption will result in more risky sexual behaviors.

*Hypothesis 3b:* It is expected sexual risk-taking will moderate the relationship between alcohol use and risky sexual behaviors such that stronger sexual risk-taking sex-related alcohol expectancies paired with increased alcohol consumption will result in more risky sexual behaviors.

*Hypothesis 3c:* It is expected that disinhibition will moderate the relationship between alcohol use and risky sexual behaviors such that stronger disinhibition sex-related alcohol expectancies paired with increased alcohol consumption will result in more risky sexual behaviors.

## CHAPTER II

### METHODOLOGY

#### Participants and Procedures

Approved by the University of Southern Mississippi's Institutional Review Board (See Appendix A), data for the current study was collected among traditional college age (18-25) African American female college drinkers from a mid-sized Southeastern university who were recruited through the Department of Psychology's research participation system (<http://usm.sona-systems.com/>). Given a specific group was being targeted, recruitment also consisted of soliciting sororities on campus to participate in the survey and emailing the survey to other organizations that work closely with African American college women as well as posts to University lists. Informed consent, measures, and validity items were administered through Qualtrics, a secure online hosting site. After completing the informed consent, participants were directed to a demographic questionnaire followed by randomly ordered measurements assessing their sex-related alcohol expectancies, alcohol consumption and risky sexual behaviors in order to reduce attrition effects.

#### *Demographic Questionnaire*

Participants were asked to complete a demographic questionnaire with questions pertaining to age, gender, race, academic classification, current relationship status, sexual orientation (i.e., heterosexual or bisexual orientation), parent's level of education, annual family income, sexual activity in the past six months and consumption of alcohol in the past month.



### *Sex Specific Alcohol Expectancy Scale (SSAES)*

The Sex Specific Alcohol Expectancy Scale (SSAES; Dermen & Cooper, 1994) is a self-report measure that assesses participants' expectancies about alcohol's influence on sexual behaviors. The survey consists of 13 items preceded by the stem "After a few drinks of alcohol." The SSAES has three domains that evaluate sexual enhancement (e.g., "I enjoy sex more than usual."), sexual risk taking (e.g., "I am less likely [to ask a partner] to use a condom."), and disinhibition (e.g., "I am more likely to do sexual things that I wouldn't do when sober."). Participants responded to each statement based on the level of agreement on a Likert-type scale ranging from 1 (strongly disagree) to 6 (strongly agree). Only the subscales were used in this study. Subscale scores were summed with higher scores indicating a stronger endorsement of sex-related alcohol expectancies. The subscales scores ranged from 5 to 30 for enhancement and from 4-24 for sexual risk taking and disinhibition subscales.

Concurrent validity has been established between greater estimated blood alcohol level in social situations and the disinhibition ( $r = .22, p < .05$ ) and sexual risk taking ( $r = .29, p < .01$ ) subscales (Pumphrey-Gordon & Gross, 2007). Convergent validity has been established with the Adolescent Alcohol Expectancy Scale ( $r = .55, p < .01$ ; Christiansen, Goldman, & Inn, 1982). Internal consistency of the three subscales for this sample was  $\alpha = .79$  for sexual risk taking,  $\alpha = .80$  for disinhibition,  $\alpha = .92$  for enhancement. Correlations of the three subscales for this sample ranged from .31 to .35.

### *Sexual Risk Survey (SRS)*

The Sexual Risk Survey (SRS; Turchik & Garske, 2009) is a self-report questionnaire that measures the frequency of sexual behaviors over the past six months. It

consists of 23 open-ended questions. Participants responded with an estimated number to items such as “How many times have you gone out to bars/parties/social events with the intent of ‘hooking up’ and having sex with someone?”, “How many sexual partners have you had sex with?”, and “How many times have you given or received oral sex on a man without a condom?” Participants were asked to respond with a “0” for questions that did not apply to them or they have never engaged in. Items were standardized by recoding the responses along a scale ranging from 0 to 4. For example, responses for number of sexual partners were coded as 0 partners = 0, 1-2 partners = 1, 3-4 partners = 2, 5 – 9 partners = 3 and 10+ partners = 4. After recoding, the item scores were summed for a total score ranging from 0 to 92, with higher scores indicating more risky sexual behavior. For this study, only the total score for the SRS was used. Overall internal consistency for this sample was  $\alpha = .79$ .

The SRS also has evidence of convergent and concurrent validity. The SRS total scale results are correlated with the Drinking and Drug Habits Questionnaire (Collins, Parks, & Marlatt, 1985;  $r = .48$ ,  $p < .001$ ), the Sexual Excitation/Sexual Inhibition Inventory for Women (Graham, Sanders, & Milhausen, 2006) with a correlation of .31 ( $p < .001$ ) for excitation and  $-.20$  for inhibition ( $p < .001$ ), and the Sexual Self-Disclosure Scale (Catania, McDermot, & Pollack, 1986;  $r = -.15$ ,  $p < .001$ ). Evidence of concurrent validity has been established by comparing results from the SRS with the Health Consequences Survey. The sexual risk taking factor has shown to be related to greater lifetime health consequences and health consequences associated with sexual risk taking (i.e., pregnancy, STIs). All subscales, except for the Intent to Engage in Risky Sexual

Behaviors, have shown to be correlated with a greater number of reported sexual health consequences (Turchik & Garske, 2009).

*Daily Drinking Questionnaire (DDQ)*

The Daily Drinking Questionnaire (DDQ; Collins, Parks, & Marlatt, 1985) is a self-report survey that assesses the amount of alcohol consumed in a typical week.

Participants were asked open-ended questions that were prefaced with the statement “Consider a typical week within the past month before answering” and responded with an estimated number of drinks they have consumed on each day of the week. The total number of drinks consumed per week was summed. Based on the number of weekly drinks, participants were categorized into light drinkers (3 drinks or less per week), moderate drinkers (4-11 drinks per week), and heavy drinkers (more than 12 drinks per week).

The DDQ has evidence of reliability in that it has been used to evaluate drinking behaviors in ethnic minority college students (Blume, Lovato, Thyken, & Denny, 2012; Browman, 2005) as well as college age women who engage in high risk sexual and drinking behaviors (Testa & Livingston, 2000). Convergent reliability has been established in finding the DDQ to be correlated with the Drinking Practices Questionnaire (DPQ; Cahalan, Cisin, & Crossley, 1969).

## CHAPTER III

### RESULTS

Prior to conducting analyses, data were screened for outliers and missing items. Initially, 155 female undergraduate students met the original inclusion criteria (i.e., identified as an African American heterosexual female of traditional college age, reported consuming alcohol at least once in the past month and engaging in sexual behavior at least once in the past six months). Thirteen participants were added after including bisexual orientation to the inclusion criteria (N=168). Truncation (i.e., the next highest score plus one) was used to correct for outliers on the Daily Drinking Questionnaire (DDQ; Collins et al., 1985) and Sexual Risk Survey (SRS; Turchik & Garske, 2009). Additionally, missing values for the DDQ and the SRS were recoded into zeros. For the Sex-Specific Alcohol Expectancy Survey (SSAE; Dermen & Cooper, 1994), missing values were corrected using linear trend at point imputation (N = 4). Participants who did not pass over 50% of validity questions or did not have a score of one or greater on the DDQ and SRS were removed from further analyses (N = 18) resulting in a final number of 150 participants.

Means, standard deviations, and intercorrelations for all variables of interest are presented in Table 2.1. The mean age for the sample was 20.1 (SD=1.65), and 26.4% of the participants were classified as freshman, 26.4% as sophomores, 30.3% as juniors, and 16.9% as seniors. For sexual orientation, 92.7% of the participants identified as heterosexual and 7.3% identified as bi-sexual. For relationship status, 44.6% of the participants reported being in a committed relationship, 38% reported being single, 14.7% reported being in a casual partner relationship, and 2.7% reported other.

Participants reported drinking on average 9.12 standard drinks per week (SD = 9.46). According to NIAAA safe drinking standards, participants in this sample are on average drinking more than the weekly limit of safe drinking for college women (i.e., 7 drinks per week; Hoeppe et al., 2013). Additionally, most participants were classified as moderate drinkers ( $n = 67$  [44.7%]) while 44 (29.4%) and 39 (25.9%) of the participants were classified as infrequent and heavy drinkers, respectively (Collins et al., 1985).

Table 2.1

*Intercorrelations and Descriptive Statistics*

	1	2	3	4	5
1. DDQ	--	--	--	--	--
2. SSAE-E	.16*	--	--	--	--
3. SSAE-S	.17*	.41**	--	--	--
4. SSAE-D	.16*	.49**	.77**	--	--
5. SRS	.30**	.35**	.31**	.31**	--
<i>Mean</i>	9.12	15.43	7.97	8.61	16.98
<i>SD</i>	9.45	7.60	4.81	5.06	12.89

\*\*Correlation is significant at the  $p < .01$  level; \*Correlation is significant at the  $p < .05$  level.

DDQ = Daily Drinking Questionnaire; SSAE-E = Sex-Specific Alcohol Expectancy - Enhancement; SSAE-S = Sex-Specific Alcohol Expectancy - Sexual Risk Taking; SSAE-D = Sex-Specific Alcohol Expectancy - Disinhibition); SRS = Sexual Risk Survey.

To test the hypothesis that sex-related alcohol expectancies predicted risky sexual behavior and alcohol consumption among the sample, two separate multiple regression analyses were conducted. The main effect terms for all three sex-related expectancies were centered and entered simultaneously in step 1. The three sex-related alcohol expectancies significantly explained approximately 15.6% of the variance in the number of reported risky sexual behaviors over the past six months ( $F(3,146) = 8.969, p < .001$ ). Specifically, enhancement sex-related alcohol expectancies significantly predicted risky sexual behaviors, such that those who endorsed more enhancement sex-related alcohol expectancies also reported more risky sexual behaviors ( $\beta = .252, p = .005$ ). No significant main effects emerged for the relationship between sexual risk taking and disinhibition and reported risky sexual behaviors. Only 4% of the variance in alcohol consumption among the sample was explained by the three sex-related alcohol expectancies ( $F(3, 146) = 2.040, p = .111$ ). Therefore, no significant main effects were found between the three sex-related alcohol expectancies and alcohol consumption. The results of these analyses are presented in Table 2.2.

Table 2.2

*Regressions of Risky Sexual Behaviors and Alcohol Consumption on Enhancement, Sexual Risk Taking, and Disinhibition Sex-Related Alcohol Expectancies*

	SRS			DDQ		
	R <sup>2</sup>	$\beta$	<i>t</i>	R <sup>2</sup>	$\beta$	<i>t</i>
<i>Step 1</i>	.16**			.04		
SSAE – E		.25*	2.88		.11	1.14
SSAE – R		.14	1.19		.10	0.80
SSAE – D		.08	0.62		.03	0.23

\* $p < .05$ ; \*\* $p < .01$

SSAE-E = Sex-Specific Alcohol Expectancy - Enhancement; SSAE-S = Sex-Specific Alcohol Expectancy - Sexual Risk Taking; SSAE-D = Sex-Specific Alcohol Expectancy - Disinhibition; SRS = Sexual Risk Survey; DDQ = Daily Drinking Questionnaire.

To test the hypothesis that sex-related alcohol expectancies would moderate the relationship between alcohol consumption and risky sexual behavior, a hierarchical multiple regression was conducted. As suggested by Frazier, Tix, and Barron, (2004), the three sex-related alcohol expectancies, continuous moderator variables, and the DDQ, a continuous predictor variable, were centered and entered in step 1. Interaction terms for each of the three sex-related alcohol expectancies and alcohol consumption (i.e., enhancement x alcohol consumption, sexual risk taking x alcohol consumption, disinhibition x alcohol consumption) were created and subsequently entered in step 2. Approximately 20.9% of the variance in reported risky sexual behaviors among the sample was significantly explained by the variables entered in step 1 (i.e., alcohol consumption, enhancement, sexual risk taking, and disinhibition sex-related alcohol expectancies;  $F(4,145) = 9.567, p < .001$ ). However, only an additional 1.3% of the variance was explained by the interaction terms entered in step 2. Main effects for alcohol consumption ( $\beta = .235, p < .002$ ) and enhancement sex-related alcohol expectancies ( $\beta = .227, p < .009$ ) emerged such that participants who reported consuming alcohol and participants who endorsed enhancement sex-related alcohol expectancies also reported engaging in more risky sexual behaviors. No significant moderating effects were found between the three sex-related alcohol expectancies, alcohol consumption, and reported risky sexual behaviors among this sample. The results of these analyses are presented in Table 2.3.

Table 2.3

*Regression of the Amount of Alcohol Consumed and Enhancement, Sexual Risk Taking, and Disinhibition Sex-Related Alcohol Expectancies on Risky Sexual Behaviors*

	SRS			
	R <sup>2</sup>	ΔR <sup>2</sup>	β	t
<i>Step 1</i>	.21**			
DDQ			.24*	3.12
SSAE – E			.23*	2.66
SSAE – S			.12	1.01
SSAE – D			.07	0.57
<i>Step 2</i>	.22	.01		
DDQ x SSAE - E			.03	0.40
DDQ x SSAE – S			.13	1.21
DDQ x SSAE – D			-.16	-1.48

\* $p < .05$ ; \*\* $p < .01$

SSAE-E = Sex-Specific Alcohol Expectancy - Enhancement; SSAE-S = Sex-Specific Alcohol Expectancy - Sexual Risk Taking;

SSAE-D = Sex-Specific Alcohol Expectancy - Disinhibition; SRS = Sexual Risk Survey; DDQ = Daily Drinking Questionnaire.



## CHAPTER IV

### DISCUSSION

The purpose of the present study was to examine the role of sex-related alcohol expectancies (i.e., enhancement, sexual risk taking, and disinhibition) in predicting alcohol consumption and risky sexual behaviors among African American college women at a predominantly White institution. Additionally, this study sought to evaluate the degree to which the strength of the relationship between alcohol consumption and risky sexual behaviors differed based on endorsement of sex-related alcohol expectancies. Previous researchers have established a relationship between alcohol use and risky sexual behaviors in comparison studies with racially heterogeneous samples of college women (Paves et al., 2013; Pedersen & LaBrie, 2007); however, there is limited research examining this relationship exclusively among African American college women, an at-risk group for experiencing sex-related negative consequences. Thus, this study adds to the understanding of within-group differences in variables (e.g., alcohol consumption, sex-related alcohol expectancies) that may predict risky sexual behavior among African American college women.

It was hypothesized that all three sex-related alcohol expectancies would predict risky sexual behavior among African American college women; however, only women who endorsed enhancement sex-related alcohol expectancies also reported engaging in more risky sexual behavior in the context of drinking. This finding, which is consistent with previous research examining sex-related alcohol expectancies among college women (Gilmore et al., 2013; Messman-Moore et al., 2013), could be explained using the alcohol expectancy theory which posits that those with stronger beliefs about alcohol's

positive effect on sexual behavior will be more likely to engage in sexual behavior when under the influence of alcohol in order to achieve desired sexual experiences (Gilmore et al., 2013; Brown et al., 1980). Additionally, the alcohol myopia theory proposes that positive sexual cues become more salient when under the influence of alcohol due to alcohol's effect on cognitive processing (Steele & Joseph, 1990). Taken together, these theories would suggest that African American college women who hold stronger enhancement expectancies are cueing into more positive sexually enhancing situations in the context of drinking, thus increasing the likelihood of engaging in risky sexual behavior in order to attain the desired effects of alcohol on sexual experiences.

In regards to alcohol use, it was hypothesized that the three sex-related expectancies would significantly predict alcohol consumption among African American college women. The results were inconsistent with what was hypothesized in that no main effects emerged for the three sex-related alcohol expectancies and alcohol consumption among the sample. The way alcohol consumption was measured in the current study could possibly explain this finding. Typical weekly drinking (i.e., amount of alcohol consumed on each day of the week) was used to assess alcohol consumption; however, African American college women may be engaging in more harmful drinking behaviors (e.g., heavy episodic drinking, binge drinking) which is different from typical weekly drinking. Poulson, Bradshaw, Huff, Peebles, and Hilton (2008) found that only 18% of the African American college students in their sample reported drinking alcohol during a typical week, while 24% of the participants reported being intoxicated once or twice in the last month. These findings indicate that although the majority of African American college students are not engaging in typical weekly drinking, when they do

consume alcohol, they are more likely drinking to the point of intoxication (Poulson et al., 2008), which suggests participation in harmful drinking behaviors such as heavy episodic drinking. Moreover, Madson and colleagues (2015) found harmful drinking patterns to be more strongly associated with alcohol-related negative consequences than typical weekly drinking among a sample of African American college students at a predominantly White institution. Thus, specifically examining harmful drinking behaviors rather than typical consumption could be more indicative of drinking patterns among African American college women. Furthermore, the majority of the women in this study were classified as moderate drinkers (i.e., 4 to 11 drinks per week; 44.7%) and a quarter of the sample was classified as heavy drinkers (11+ drinks per week; 25.9%). Participants also reported drinking on average 9.12 standard drinks a week, which is more than the weekly recommend limit of 7 drinks per week for college women by the NIAAA (Hoepfner et al., 2013). Although alcohol consumption was measured by typical weekly drinking, descriptive data from this study provides evidence that African American college women are drinking at levels that may place them at an increased risk for experiencing alcohol-related negative consequences.

It was predicted that each of the three sex-related alcohol expectancies would moderate the relationship between alcohol consumption and risky sexual behavior; however, no moderating effects were found. The reasons given for the lack of main effects of the three sex-related expectancies and alcohol consumption could also be used to explain why no moderating effects were found. Previous research suggest that African American students are not engaging in typical weekly drinking (Poulson et al., 2008) and report experiencing more alcohol related negative consequences when engaging in more

harmful drinking than typical weekly drinking (Madson et al., 2015). Therefore, measuring harmful drinking patterns instead of typical weekly drinking may have yielded different results. Another explanation for these results could be that African American college women are engaging in risky sexual behaviors outside the context of drinking and this may be placing them at an increased risk for experiencing sex-related negative consequences. This study looked at risky sexual behaviors in the context of alcohol consumption; however, research suggests that African American college students engage in inconsistent condom use even when sober (Poulson et al., 2008). Therefore, future research could investigate differences in risky sexual behavior within and outside the context of alcohol consumption among African American college women.

Although no moderating effects were found in the current study, main effects reflect that African American college women who consumed alcohol and endorsed enhancement sex-related alcohol expectancies also reported engaging in more risky sexual behaviors. Previous research on sex-related alcohol expectancies among racially heterogeneous samples of college women has found similar results (Gilmore et al., 2013; Messman-Moore et al., 2013). Thus, one potential explanation for this finding is that African American women at predominantly White institutions may be modifying their drinking patterns and drinking expectancies to reflect the drinking norms of the dominant culture. African American college students who are more assimilated (i.e., affiliate less with African culture and affiliate more with Caucasian culture) consume alcohol more frequently than less assimilated African American students (Abdullah & Brown, 2012). Peralta (2010) suggested that African American women in particular might participate in the drinking culture at predominantly White institutions due to the need for social

acceptance. Therefore, future research may want to examine differences in this relationship between African American women at predominantly White institutions and those enrolled at HBCUs to create congruent intervention and prevention methods to address the unique needs of African American women at different institutions.

The current findings have several practical implications. In an effort to develop culturally congruent prevention and intervention methods that aim to reduce sex-related negative consequences among African American college women, the finding that more risky sexual behavior was positively associated with alcohol consumption suggests a need to examine the role of alcohol use as it relates to various risky sexual behaviors among African American college women. Moreover, results suggest that focusing on enhancement sex-related alcohol expectancies could be beneficial when using interventions with African American college women that aim to prevent risky sexual behavior. Being that expectancies are modifiable (Hendershot, Stoner, George, & Norris, 2007), specifically targeting expectancies around sexual enhancement could be useful in promoting preventive, safe sex-related strategies (e.g., carrying condoms) when anticipating future sexual behavior in the context of alcohol use.

The current findings also have implications for future research. In terms of the relationship between sex-related alcohol expectancies and alcohol consumption, future research could compare drinking patterns among African American college women at predominantly White institutions and HBCUs. There may be similarities in the pattern of drinking and differences in the amount of consumption when drinking between African American college women at different institutions. The majority of college students at HBCUs do not engage in typical weekly drinking but drink with the purpose of

intoxication when they do drink (Poulson et al., 2008). Additionally, there was no relationship between sex-related alcohol expectancies and typical weekly drinking in the present study. Thus, sex-related alcohol expectancies could be more strongly endorsed in the context of harmful drinking for African American college women at predominantly White institutions as well HBCUS. On the other hand, differences could be found in the amount of alcohol consumed by African American women who attend predominately White institutions in comparison to those attending HBCUS. More research is needed to understand possible similarities and differences in drinking patterns in order to inform prevention and intervention methods working with African American women at different collegiate institutions. Similarly, research should continue to explore racial differences in the relationship between alcohol consumption and risky sexual behavior among African American and Caucasian college women to inform culturally congruent intervention and prevention methods.

The current study also provides research implications for sex-related alcohol expectancies. It may be beneficial to examine sex-related alcohol expectancies in varying drinking contexts (e.g., convivial, intimate). Levit, Derrick, and Testa (2014) found that relationship enhancement expectancies moderated the association between drinking context and relationship functioning such that women with high endorsement of enhancement expectancies were more likely to have a positive relationship outlook when drinking with a partner. Thus, the situations in which African American college women drink may influence which type of sex-related alcohol expectancy is endorsed.

In regard to future research on risky sexual behaviors among African American college women, religion has been found to be associated with alcohol consumption and

risky sexual behaviors among college students. College students who identify with a religious affiliation report consuming less alcohol than students who do not identify with a religious affiliation (Wells, 2010). Additionally, in a sample of college students from a university in the southeastern region of the United States, it was found that higher levels of alcohol use and lower levels of religious affiliation was associated with increased engagement in casual sex (Manthos, Owen, & Fincham, 2014). Thus, one focus of future research may be to examine the degree to which religion/spirituality moderates the relationship between alcohol use and risky sexual behavior among African American college women.

Relationship status could also be useful to look at in terms of alcohol use and risky sexual behaviors among African American college women considering 44.6% of the participants in the current sample reported being in a committed relationship. Research suggests that sexually active college students in committed relationships tend to consume less alcohol and are less likely to engage in unprotected vaginal sex than sexually active students in casual relationships (e.g., sex with acquaintances or someone they just met; Brown & Venable, 2010). Considering the phenomenon of “man-sharing” (i.e. romantic relationships that involve sharing a man with another woman due to the lack of available men; Harris & Mallory, 2010) in the African American community, relationship status could play a major role in risky sexual behavior among African American college women. Additionally, African American college women are more likely than African American college men to report engaging in unprotected sex due to the belief that they are in love (Poulson et al., 2008). Thus, future research should

possibly focus on the association between relationship status, alcohol use, and risky sexual behaviors among African American college women.

Although the current findings are relevant and informative, there are limitations to this study. In terms of generalizability, caution should be taken when applying these findings to the college population at large. The sample for the current study was collected from a single, mid-sized university in the southeastern region of the United States. Thus, there may be unique factors unaccounted for that impacted the results, particularly the findings related to alcohol consumption. For example, college students from the southeastern region have been found to consume less alcohol than students from other regions of the country (Johnston et al., 2011). The influence of religion in the southern region of the United States could have been an influential factor. Research suggests that college students who identify with a religious affiliation consume less alcohol, drink fewer alcoholic beverages in a week, and engage in less heavy episodic drinking (Burke, Olphen, Eliason, Howell, & Gonzalez, 2014; Wells, 2010; Ellison, Bradshaw, Rote, Storch, & Trevino, 2008). Religiosity and religious affiliation was not examined in the current study. Therefore, the possible influence these factors had on the findings could not be fully determined. Because the sample consisted solely of African American college women, the findings from the current study may not be generalizable to all African American women of traditional college age. The college environment may be a protective factor and reduce the likelihood of increased alcohol use among some African American college students. Previous research among African American male and female students has found heavy drinking to be inversely related with attendance to four or two-year collegiate institutions (Paschall, Bersamin, & Flewelling, 2005). Thus,



differences in alcohol consumption may exist among African American college women and African American women of traditional college age who are not enrolled at a university and should be evaluated further.

In addition to generalizability, there are also limitations associated with the use of self-report data. Underreporting of the sample may have occurred as a result of reliance on self-report measures. When examining stigmatized behaviors such as alcohol use and risky sexual behaviors, values and beliefs related to gender and culture may have contributed to some level of social desirability among the current sample. However, research suggests that computer-based surveys, which was the method used in the current study, can help reduce bias reporting when assessing stigmatized behaviors (Simoes, Batos, Moreira, Lynch, & Metzger, 2006). Lastly, the cross sectional design of the current study prevents drawing causal conclusions about the results. A longitudinal design study, such as a diary design, that examines alcohol consumption of African American college women over time could aid in understanding drinking patterns among this particular group of college students and provide insight into how alcohol use can be more accurately measured among African American college women.

In conclusion, the current study addresses an important gap in the literature in examining alcohol consumption and risky sexual behaviors among African American college women, an at-risk group for experiencing sex-related negative consequences. Moreover, the findings highlight clinical implications for addressing sex-related alcohol expectancies, specifically enhancement expectancies, as it relates to risky sexual behaviors among African American college women. The current study also conveys the significance in looking at within-group differences to further efforts in establishing

culturally congruent prevention and intervention methods focused on reducing sex-related negative consequences among African American college women.

## APPENDIX A

## INSTITUTIONAL REVIEW BOARD NOTICE OF COMMITTEE ACTION



THE UNIVERSITY OF  
SOUTHERN MISSISSIPPI

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**INSTITUTIONAL REVIEW BOARD**

118 College Drive #5147 | Hattiesburg, MS 39406-0001

Phone: 601.266.5997 | Fax: 601.266.4377 | [www.usm.edu/research/institutional.review.board](http://www.usm.edu/research/institutional.review.board)

**NOTICE OF COMMITTEE ACTION**

The project has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services (45 CFR Part 46), and university guidelines to ensure adherence to the following criteria:

- The risks to subjects are minimized.
- The risks to subjects are reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered regarding risks to subjects must be reported immediately, but not later than 10 days following the event. This should be reported to the IRB Office via the "Adverse Effect Report Form".
- If approved, the maximum period of approval is limited to twelve months.  
Projects that exceed this period must submit an application for renewal or continuation.

PROTOCOL NUMBER: 14072504

PROJECT TITLE: Sex-Related Alcohol Expectancies, Alcohol Consumption, and Risky Sexual Behaviors among African American College Woman

PROJECT TYPE: New Project

RESEARCHER(S): Danielle P. Cottonham

COLLEGE/DIVISION: College of Education and Psychology

DEPARTMENT: Psychology

FUNDING AGENCY/SPONSOR: N/A

IRB COMMITTEE ACTION: Expedited Review Approval

PERIOD OF APPROVAL: 07/31/2014 to 07/30/2015

**Lawrence A. Hosman, Ph.D.**  
**Institutional Review Board**

## APPENDIX B

## ELECTRONIC INFORMED CONSENT

**PURPOSE:** The present study is designed to examine the association between sex-related alcohol expectancies, alcohol consumption, and risky sexual behaviors among African American college women.

**DESCRIPTION OF STUDY:** Participation will consist of completing several brief questionnaires via the Internet. The completion of these initial questionnaires should take approximately 30 minutes and participants will receive .5 credit. Questionnaires completed via the Internet will concern your feelings, attitudes, behaviors, and experiences. You will only receive credit for completing the survey and answering honestly.

**BENEFITS:** Participants are not expected to directly benefit from their participation. However, it is hoped that this study will contribute to our understanding of alcohol consumption and risky sexual behaviors.

**RISKS:** No foreseeable risks, beyond those present in routine daily life, are anticipated in this study. If participants find they are distressed by completing these questionnaires, they should notify the researcher immediately.

**CONFIDENTIALITY:** You will place your name on the informed consent form and the internet-based questionnaires. At the conclusion of data collection for this study, all identifying information will be deleted. Data gathered from the present study will be stored in a secure location for six years, at which time it will be destroyed. Findings will be presented in aggregate form with no identifying information to ensure confidentiality.

**PARTICIPANT ASSURANCE:** Whereas no assurance can be made concerning results that may be obtained (since results from investigational studies cannot be predicted) the researcher will take every precaution consistent with the best scientific practice. Participation in this project is completely voluntary, and participants may withdraw from this study at any time without penalty, prejudice, or loss of benefits. Questions concerning the research should be directed to the primary researcher Danielle Cottonham (Danielle.cottonham@eagles.usm.edu) or the research supervisor, Dr. Mike Madson at (601) 266-4546 (or e-mail at michael.madson@usm.edu). This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human participants follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, Box 5147, Hattiesburg, MS 39406, (601) 266-6820.

If you experience distress as a result of your participation in this study, please notify the primary researcher Danielle Cottonham (Danielle.cottonham@eagles.usm.edu) or the research supervisor, Dr. Michael Madson (michael.madson@usm.edu). A list of available

agencies that may be able to provide services for you are provided below:

Community Counseling and Assessment Clinic (601) 266-4601

Student Counseling Services (601) 266-4829

Pine Belt Mental Healthcare (601) 544-4641

Forrest General Psychology Service Incorporated (601) 268-3159

**Consent is hereby given to participate in this study.**

## APPENDIX C

## DEMOGRAPHIC QUESTIONNAIRE

1. What is your gender?
  - a. Female
  - b. Male
2. How old are you?
3. What is your current academic status?
  - a. Freshman
  - b. Sophomore
  - c. Junior
  - d. Senior
4. What is your racial/ethnic background?
  - a. White
  - b. Black
  - c. Hispanic
  - d. American Indian or Alaska Native
  - e. Asian
  - f. Native Hawaiian or Other Pacific Islanders
  - g. Other
5. What is your sexual orientation?
  - a. Heterosexual (i.e., straight)
  - b. Homosexual (i.e., gay/lesbian)
  - c. Bisexual
  - d. Other
6. Have you drunk alcohol in the past 30 days?
  - a. Yes
  - b. No
7. How many days have you drunk alcohol in the past 30 days?
8. Are you a member of a sorority?
  - a. Yes
  - b. No
9. Have you been sexually (vaginal, oral, or anal) active in the last 6 months?
  - a. Yes
  - b. No
10. What is your current relationship status?
  - a. Single (i.e., not involved with anyone)

- b. Casual partner (i.e., someone you do not consider to be your boyfriend, someone you are not romantically involved with)
  - c. Committed partner (i.e., someone you consider to be your boyfriend, someone you are in an exclusive relationship with)
  - d. Other
11. If you are currently involved in a sexual relationship, how long have you been in the relationship?
- a. Less than a month
  - b. 1 month – 6months
  - c. 6 months – 1 year
  - d. 1 year or more
12. What is the highest level of education obtained by your father?
- a. GED
  - b. High School Diploma
  - c. Associates Degree
  - d. Bachelor's Degree
  - e. Master's Degree
  - f. Doctoral, Medical, Law Degree
13. What is the highest level of education obtained by your mother?
- a. GED
  - b. High School Diploma
  - c. Associates Degree
  - d. Bachelor's Degree
  - e. Master's Degree
  - f. Doctoral, Medical, Law Degree
14. What is your family's annual income?
- a. 20,000 – 30,000
  - b. 40,000 – 50,000
  - c. 60,000 – 70,000
  - d. 80,000 – 90,000
  - e. 100,000+

## APPENDIX D

## DAILY DRINKING QUESTIONNAIRE (DDQ)

\*\*A standard drink is defined as a 12 oz beer, 1.5 oz shot, or 5 oz. of wine\*\*

1. For the past month, how much alcohol do you typically consume on Mondays?

How many standard drinks?

Over how many hours?

2. For the past month, how much alcohol do you typically consume on Tuesdays?

How many standard drinks?

Over how many hours?

3. For the past month, how much alcohol do you typically consume on Wednesdays?

How many standard drinks?

Over how many hours?

4. For the past month, how much alcohol do you typically consume on Thursdays?

How many standard drinks?

Over how many hours?

5. For the past month, how much alcohol do you typically consume on Fridays?

How many standard drinks?

Over how many hours?

6. For the past month, how much alcohol do you typically consume on Saturdays?

How many standard drinks?

Over how many hours?

7. For the past month, how much alcohol do you typically consume on Sundays?

How many standard drinks?



Over how many hours?

8. Think of the one occasion during the PAST MONTH where you drank the most.

Fill in the number of standard drinks of each type you consumed.

Beer?

Wine?

Spirits?

Over how many hours?

## APPENDIX E

## SEX SPECIFIC ALCOHOL EXPECTANCY SURVEY

Many people believe that alcohol can influence how they feel and act sexually. We would like to know how to know you think having a few drinks of alcohol affects your sexual feelings and behavior. Please answer the following questions based on level of agreement with 1 being strongly disagree to 6 being strongly agree.

After a few drinks of alcohol:

	SD (1)	DA (2)	SDA (3)	SSA (4)	A (5)	SA (6)
I feel closer to a sexual partner.						
I am more sexual responsive.						
I am less nervous about sex.						
I enjoy sex more than usual.						
I am a better lover.						
I am less likely to use birth control.						
I am less likely to take precaution before having sex.						
I am less likely to talk with a new sexual partner about whether he has a sexually transmitted disease, like HIV or gonorrhea.						
I am less likely (to ask a partner) to use a condom.						
I have sex with people whom I wouldn't have sex with if I were sober.						
I am more likely to do sexual things that I wouldn't do when sober.						
I find it harder to say no to sexual advances.						
I am more likely to have sex on a first date.						

\*SD = Strongly Disagree; DA = Disagree; SDA = Somewhat Disagree; SSA = Somewhat Agree; A = Agree; SA=Strongly Agree

## APPENDIX E

## SEXUAL RISK SURVEY (SRS)

Please read the following statements and record the number that is true for you over the past 6 months for each question on the blank. If you do not know for sure how many times a behavior took place, try to estimate the number as close as you can. Thinking about the average number of times the behavior happened per week or per month might make it easier to estimate an accurate number, especially if the behavior happens fairly regularly. If you've had multiple partners, try to think about how long you were with each, and try to get accurate estimate of the total number of each behavior. If the question does not apply to you or you have never engaged in the behavior in the question, put a "0" on the blank. Please do not leave items blank.

Remember that in the follow questions "sex" includes oral, anal, and vaginal sex and that "sexual behavior" includes passionate kissing, making out, fondling, petting, oral-to-anal stimulation, and hand-to-genital stimulation. Please consider only the last 6 months when answering and please be honest.

In the past 6 months:

1. How many partners have you engaged in sexual behavior with but not had sex with?
2. How many times have you left a social event with someone you just met?
3. How many times have you "hooked up" but not had sex with someone you didn't know or didn't know well?
4. How many times have you gone out to bars/parties/social events with the intent of "hooking up" and engaging in sexual behavior but not having sex with someone?
5. How many times have you gone out to bars/parties/social events with the intent of "hooking up" and having sex with someone?
6. How many times have you had an unexpected and unanticipated sexual experience?
7. How many times have you had a sexual encounter you engaged in willingly but later regretted?

For the next set of questions, follow the same direction as before. However, for 8-23, if you have never had sex (oral, anal, or vaginal), please put a "0" on each blank.

When drinking alcohol:

8. How many partners have you had sex with?
9. How many times have you had vaginal intercourse without latex or polyurethane condom?
10. How many times have you had vaginal intercourse without protection against pregnancy?
11. How many times have you given or received oral sex on a man without a condom?

12. How many times have you given or received oral sex on a women without adequate protection?
13. How many times have you had anal sex without a condom?
14. How many times have you or your partner engaged in anal penetration by hand (“fisting”) or other object without a latex glove or condom followed by unprotected sex?
15. How many times have you given or received oral stimulation of the anal region (“rimming”) without adequate protection?
16. How many people have you had sex with that you know but are not involved in any sort of relationship with (i.e., “friend with benefits”)?
17. How many times have you had sex with someone you don’t know well or just met?
18. How many times have you or your partner used alcohol or drugs before or during sex?
19. How many times have you had sex with a new partner before discussing sexual history, IV drug use, disease status and other current sexual partners?
20. How many times (that you know of) have you have sex with someone who has had many sexual partners?
21. How many partners (that you know of) have you had sex with who had been sexually active before you were with them but had not been test for STIs/HIV?
22. How many partners have you had sex with that you didn’t trust?
23. How many times (that you know of) have you had sex with someone who was also engaging in sex with others during the same time period?

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