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Predictors of Alcohol Consumption, Use of Protective Behavioral Strategies, and Alcohol-Related Sexual Consequences: A Gendered Social Learning Perspective

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The University of Southern Mississippi

PREDICTORS OF ALCOHOL CONSUMPTION, USE OF PROTECTIVE
BEHAVIORAL STRATEGIES, AND ALCOHOL-RELATED SEXUAL
CONSEQUENCES: A GENDERED SOCIAL LEARNING PERSPECTIVE

by

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A Dissertation
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of The University of Southern Mississippi
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for the Degree of Doctor of Philosophy

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ABSTRACT

PREDICTORS OF ALCOHOL CONSUMPTION, USE OF PROTECTIVE BEHAVIORAL STRATEGIES, AND ALCOHOL-RELATED SEXUAL CONSEQUENCES: A GENDERED SOCIAL LEARNING PERSPECTIVE

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Given the long standing gender differences in regard to alcohol-related behaviors and consequences, understanding how conformity to gender norms may predict alcohol-related outcomes is an important next step in developing effective prevention efforts aimed at reducing alcohol-related sexual consequences for college women. The current study examined the relationships among conformity to feminine and masculine gender norms and alcohol-related outcomes (harmful drinking patterns, protective behavior strategy use, and sex-related consequences) among college women. Another primary aim of the study was to determine the extent to which sex-specific alcohol expectancies mediated the associations between gender norms and alcohol-related outcomes. Participants were 421 undergraduate college women who indicated that they had consumed alcohol at least once during the thirty days prior to completing the study measures, and who were between the ages of 18 and 25. Conformity to feminine norms was not directly predictive of any of the alcohol-related outcomes, while conformity to masculine norms was only associated with greater alcohol-related risky sexual behavior. Only sexual enhancement alcohol expectancies emerged as a mediator of the gender norms—alcohol-related outcomes link. Clinical and research implications are discussed.

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LIST OF ABBREVIATIONS

CFN	Conformity to Feminine Norms
CMN	Conformity to Masculine Norms
HDP	Harmful Drinking Patterns
PBS	Protective Behavioral Strategies
RSB	Alcohol-related Risky Sexual Behavior
SV	Alcohol-related Sexual Victimization

CHAPTER I

INTRODUCTION

Statement of the Problem

Recent attention has focused on the rise in alcohol consumption among college women (Hoepfner, Paskausky, Jackson, & Barnett, 2013; Johnston, O'Malley, Bachman, & Schulenberg, 2013). For instance, Hoepfner et al. (2013) found that college women exceeded the National Institute on Alcohol Abuse and Alcoholism (NIAAA) weekly guidelines for safe drinking (i.e., women reported drinking more than 7 drinks per week) more frequently than college men. Even though the gender gap in regard to alcohol consumption has been decreasing in recent years (Hoepfner et al., 2013; Johnston et al., 2013), there are still clear gender differences in regard to the reported alcohol-related behaviors and consequences. For example, college women tend to use protective behavioral strategies while drinking more often than do college men (LaBrie, Grant, & Hummer, 2011; Lewis, Logan, Kaysen, & Kilmer, 2010; Madson & Zeigler-Hill, 2013; Walters, Roudsari, Vader, & Harris, 2007), and college women report more personal alcohol-related consequences such as risky sexual behavior and sexual victimization (Abbey, 2002; Corbin, Bernat, Calhoun, McNair, & Seals, 2001; Ham & Hope, 2003; NIAAA, 2013). Pronounced gender differences in alcohol-related behaviors and outcomes have been reported in the literature for decades, with men historically reporting higher rates of alcohol consumption and alcohol-related negative consequences than women (O'Malley & Johnston, 2002). However, a relatively new phenomena exists, wherein college women are reporting similar, if not more problematic, rates of alcohol

consumption, when compared to college men (Hoepfner et al., 2013; Johnston et al., 2013). Considering both the historical and recent trends in relation to gender differences in alcohol-related behaviors and outcomes, research examining gender-relevant issues related to drinking among college students is needed. Specifically, it is important to better understand the gender-related predictors of alcohol-related behaviors and consequences. Thus, using the gendered social learning model (Addis, Mansfield, & Syzdek, 2010; Smiler, 2004) as the overarching framework, the purpose of the current study is to examine the relations among conformity to feminine and masculine gender norms, sex-specific alcohol expectancies, alcohol consumption, protective behavioral strategy use, and alcohol-related sexual consequences—both risky sexual behavior and sexual victimization—among college women.

CHAPTER II

REVIEW OF RELATED LITERATURE

Alcohol Consumption among College Women

Since the 1970s, researchers have speculated about whether the increasing gender equality in mainstream society would result in a narrowing of the gender gap in alcohol consumption (Wechsler & Gottlieb, 1980). In fact, researchers coined the term *convergence hypothesis* to describe their belief that men and women would eventually adopt indistinguishable patterns of drinking. Even though gender differences in alcohol consumption among the college population have been well documented (DeMartini & Carey, 2012; Johnston et al., 2012; Randolph, Torres, Gore-Felton, Lloyd, & McGarvey, 2009), the annual Monitoring the Future study indicates that the gender gap in regard to alcohol consumption has been gradually diminishing since the study began in 1975 (Johnston et al., 2013; O'Malley & Johnston, 2002). According to the most recent Monitoring the Future study, 34% of college women reported consuming five or more standard alcoholic beverages in a row at least once within the past two weeks, compared to 41% of college men (Johnston et al., 2013). Similar rates of alcohol consumption across genders, with 67% of college women and 71% of college men reporting consuming alcohol at least once within the past thirty days, were found in the 2009-2011 CORE alcohol and drug survey (Core Institute, 2010; Core Institute, 2012). Taken together, these trends in alcohol use among the college student population provide support for the *convergence hypothesis*, suggesting that college women are currently drinking more like their male peers than they have in the past.

While college men report higher daily drinking rates than college women (Johnston et al., 2013), recent research indicates that college women may be engaging in more problematic patterns of alcohol use (Hoepfner et al., 2013; Johnston et al., 2013). Specifically, Hoepfner et al. (2013) found that college women were over 1.5 times more likely to exceed both the daily and weekly NIAAA guidelines for safe drinking. The National Institute on Alcohol Abuse and Alcoholism (NIAAA, 2009) defines low-risk drinking as consuming no more than 4 drinks per day or 14 drinks per week for men, and no more than 3 drinks per day or 7 drinks per week for women. Exceeding these recommended guidelines is classified as “heavy or high-risk drinking” according to the United States Department of Health and Human Services (USDHHS, 2010). Johnston and colleagues (2013) found that 37% of college women report getting drunk at least once within the past month, and nearly 10% report having 10 or more drinks in a row within the past two weeks. Additionally, Slutske et al. (2004) demonstrated that upon matriculation into college, women report a dramatic increase in their frequency of being drunk (determined solely by retrospective self-report). Overall, these results highlight a trend where college women are drinking more often, more heavily, and drinking to get drunk, revealing the potential dangers associated with college women’s drinking patterns.

With regard to college women’s problematic alcohol consumption patterns, one theme that has emerged in the literature suggests that women falsely perceive that men want them to consume alcohol (LaBrie, Cail, Hummer, Lac, & Neighbors, 2009; Young, Morales, McCabe, Boyd, & D’Arcy, 2005). For instance, Young and colleagues (2005) found that college women tend to consume larger amounts of alcohol due to the belief that doing so would lead to positive attention from their male peers. Further, Young and

colleagues (2005) posit that college women's drinking patterns are partially based on their perceptions of men's expectations and false assumptions that men find it sexually appealing when women can "drink like the guys." Therefore, it appears college women may be embracing more masculine drinking patterns in an attempt to fit in with and/or win the attention of their male peers.

The convergence of college women's and men's drinking patterns is of increasing concern due to the fact that alcohol affects women differently than men. Specifically, metabolic differences cause women to reach levels of intoxication sooner than do men (Perkins, Goldman, Boyd, & Fade, 2002), and women will have higher blood alcohol content levels after consuming the same number of alcoholic beverages as men. Thus, when college women adopt drinking patterns similar to college men, they are inevitably more susceptible to the immediate consequences of consumption (e.g., car accidents, assault, injury) as well as the more long-term consequences of drinking (e.g., chronic health conditions such as liver disease, and heart disease; Smith & Berger, 2010). Adding to the problems associated with drinking among college women, Perkins and colleagues (2002) found that women are more likely than men to use other drugs along with alcohol, further increasing their risk of experiencing negative consequences. Perhaps, the most notable finding is that, of the college students who exceeded the NIAAA daily safe drinking guidelines more than 3 times a week, women are much more reluctant to identify themselves as problem drinkers (Smith & Berger, 2010). Metabolic differences, increased likelihood of combining alcohol with other drugs, and lack of self-detection of alcohol misuse are all factors that place college women at increased risk for experiencing negative consequences as a result of consuming alcohol.

Alcohol-related Sexual Consequences

Alcohol-related consequences among college women have similarly increased in recent years, and consequences associated with alcohol consumption progress along a continuum from less problematic to more severe (Ham & Hope, 2003; Warren & Hewitt, 2010). As a result of alcohol consumption, it is estimated that annually nearly 600,000 college students are unintentionally injured, nearly 700,000 are physically assaulted by another student who is under the influence, more than 400,000 engage in unprotected sex, and more than 100,000 claim being too intoxicated to know whether they consented to having sex (NIAAA, 2013). Notably, the aforementioned NIAAA statistics include both college men and women, as statistics for only college women were unable to be obtained. Moreover, for women drinkers, sexual consequences are among some of the most prevalent (Perkins et al., 2002; Smith & Berger, 2010; Sugarman, DeMartini, & Carey, 2009), and college women commonly report engaging in risky sexual behavior (e.g., unprotected sex, regretted sex) and experiencing sexual victimization (e.g., coercion, threat, force) after consuming alcohol (Abbey, Zawacki, Buck, Clinton, & McAuslan, 2004; Messman-Moore, Ward, & DeNardi, 2013; NIAAA, 2013; Orchowski & Barnett, 2012; Smith & Berger, 2010; Sugarman et al., 2009). For the purposes of this study, the operational definitions for the terms *risky sexual behavior* and *sexual victimization* were selected to align with definitions consistent with previous studies using college student samples (Abbey et al., 2004). As such, *risky sexual behavior* refers to experiences such as failure to use a condom, forgetting to take birth control, and having casual sex (e.g., multiple sex partners, sex outside of a committed relationship), and *sexual victimization* refers to coerced sexual acts that range from sexual contact to penetration (Abbey et al.,

2004). Moreover, engaging in risky sexual behavior and/or experiencing sexual victimization often leads to both short and long-term consequences (i.e., physical, mental, emotional, and social problems) for college women, and current prevention efforts have had limited success in reducing the occurrence of alcohol-related risky sexual behavior and sexual victimization among college women (Corbin et al., 2001; Dermen & Thomas, 2011).

Risky sexual behavior is unfortunately prevalent in the college population, with the majority of casual sexual encounters occurring in the presence of alcohol (Fielder & Carey, 2010; Lewis, Granato, Blayney, Lostutter, & Kilmer, 2012). Regardless of their relationship status, the majority of sexually active college students report that they consumed alcohol prior to their most recent sexual encounter, suggesting that alcohol serves as a sexual facilitator between both casual and committed romantic partners (Desiderato & Crawford, 1995; Fielder, Walsh, Carey, & Carey, 2013; Kiene, Barta, Tennen, & Armeli, 2009). Because alcohol impairs cognitive processes such as judgment and decision-making, the prominence of alcohol-related risky sexual behavior is problematic. In fact, over 40% of sexually active heterosexual students reported that consuming alcohol prior to a sexual encounter would decrease their chances of using a condom (Desiderato & Crawford, 1995). Additionally, Hingson, Heeren, Winter, and Wechsler (2005) found that nearly 10% of all college students reported having had unprotected sex at least once as a result of drinking alcohol in the past academic year, demonstrating the all too frequent nature of alcohol-related risky sexual behavior among college students. Given the prevalence of alcohol-related risky sexual behavior and sexual victimization occurring in the college population, it is important that prevention

efforts address short and long term effects of alcohol-related sexual consequences, in particular, for college women.

The prevalence of alcohol-related risky sexual behavior on college campuses is especially concerning for college women because women are particularly vulnerable to the physical consequences of unprotected sex such as unplanned pregnancy or contracting sexually transmitted infections and diseases (Centers for Disease Control and Prevention, CDC, 2013). Sexually transmitted diseases and unintended pregnancies inevitably change the lives of college women forever by creating increased risk of cervical cancer, increased susceptibility to HIV, unexpected financial responsibilities, and barriers to obtaining a degree (CDC, 2012; CDC, 2013; Sabia & Rees, 2009). Additionally, society at large is indirectly affected by the rates of sexually transmitted diseases and unintended pregnancies via increasing burden and cost for the health care system. In the United States, direct medical costs associated with sexually transmitted infections have totaled over \$15 billion in a single year (Chesson, Blandford, Gift, Tao, & Irwin, 2004). Moreover, the Centers for Disease Control and Prevention (CDC) estimates that there are approximately 20 million new sexually transmitted infections occurring each year in the United States, and that females ages 15 to 24 are most at risk, accounting for nearly half of all new sexually transmitted infections (CDC, 2013; Lewis, Logan, & Neighbors, 2009). During 2012, Chlamydia rates for females ages 15 to 24 were higher than the rates observed in any other age or risk group (CDC, 2013). Additionally, it is estimated that over 3.4 million unintended pregnancies occur each year in the United States (Guttmacher Institute, 2013), and approximately 2.5% of college women report having become unintentionally pregnant within the past academic year

(American College Health Association, 2008). Statistics such as these highlight the prevalence of various outcomes associated with sexual behavior.

In addition to engaging in risky sexual behavior, college women report high rates of sexual coercion and/or sexual victimization as a result of their drinking. Prevalence rates of sexual victimization are three times higher for college women than they are for their same aged peers (Corbin et al., 2001). In fact, the chances of a woman experiencing sexual aggression are up to nine times higher on days when she consumes alcohol (Parks & Fals-Stewart, 2004), and college women are more likely than college men to regret a sexual encounter because they felt pressured by their partner (Oswalt, Cameron, & Kobe, 2005). Research has indicated that up to 80% of college women drinkers report a history of sexual victimization (not necessarily occurring in the context of alcohol consumption) and that a history of sexual victimization increases their risk of engaging in future risky sexual behavior (Abbey, Parkhill, BeShears, Clinton-Sherrod, & Zawacki, 2006; Masters et al., 2013). Thus, a complex relationship exists between engaging in risky sexual behavior and experiencing sexual victimization that collectively puts college women at risk for a wide array of short and long-term negative consequences.

College women who report sex-related consequences associated with their drinking are more likely than those who do not to also report increased levels of drinking, worse overall mental health, use unhealthy coping strategies, and less use of protective drinking behaviors (Bedard-Gilligan, Kaysen, Desai, & Lee, 2011; Brahms, Ahl, Reed, & Amaro, 2011). Therefore, a reciprocal relationship appears to exist between alcohol use and sexual consequences among college women that puts those with a history of such experiences at an increased risk of revictimization (Lindgren, Neighbors, Blayney,

Mullins, & Kaysen, 2012). While prevention efforts aimed at reducing sexual victimization among college women have proven successful for women who report no previous experience of sexual victimization, prevention efforts have failed to curtail sexual victimization for women who have a previous history of sexual assault (Corbin et al., 2001). This is particularly important because once a woman has been sexually victimized, the risk of revictimization is further exacerbated when she engages in high-risk behaviors such as consuming alcohol (Abbey et al., 1996; Corbin et al., 2001). Because prevention efforts have had limited success in reducing sexual consequences among college women (Corbin et al., 2001), continued research is needed to inform the development of effective intervention and prevention efforts.

In an effort to better understand the factors that might increase a woman's risk of alcohol-related sexual consequences, Corbin et al. (2001) found that compared to nonvictims, women who reported a history of severe sexual victimization (i.e., attempted and/or completed rape) consumed significantly more alcohol (i.e., 14 drinks per week compared to 8.5 by nonvictims) and held greater positive alcohol expectancies (i.e., tension reduction, global positive change, and sexual enhancement). However, it remains unclear whether the higher rate of alcohol consumption and positive expectancies was a result of previous sexual victimization or a contributing factor to initial victimization. Thus, continued research is needed to investigate the underlying mechanisms responsible for the alcohol-sexual consequences link, as well as to identify proximal predictors of alcohol-related behaviors and outcomes (e.g., conformity to gender norms, sex-specific alcohol expectancies). Further, when considering the longstanding gender differences in regard to alcohol-related outcomes and behaviors (O'Malley & Johnston, 2002), an

individual's level of adherence to traditionally feminine and masculine gender norms (i.e., conformity to gender norms), as well as their beliefs about the effects of consuming alcohol (i.e., alcohol expectancies) may help elucidate the social-cultural mechanisms underlying the alcohol-sexual consequences link.

Sex-Specific Alcohol Expectancies

Alcohol expectancies, or beliefs about the effects of consuming alcohol, are one such factor that helps predict an individual's drinking decisions and drinking outcomes (Brown, Goldman, Inn, & Anderson, 1980; Fromme, Stroot, & Kaplan, 1993; Madson, Moorer, Zeigler-Hill, Bonnell, & Villarosa, 2013). The relationship between alcohol expectancies and alcohol consumption is reciprocal in nature and mutually determined (Christiansen, Smith, Roehling, & Goldman, 1989); in other words, individuals' alcohol expectancies influence their use of alcohol, and their experience with consuming alcohol simultaneously influences their alcohol expectations. Alcohol expectancies can be positive, meaning that drinking is believed to result in desired effects, or negative, meaning that drinking is believed to result in undesirable effects (Brown et al., 1980; Fromme et al., 1993). Positive expectancies include the belief that consuming alcohol will result in increased sociability, tension reduction, liquid courage, and enhanced sexuality; while negative expectancies include the belief that consuming alcohol will result in cognitive behavioral impairment, increased risk and aggression, and negative self-perception (Fromme et al., 1993). The more an individual values or wants to achieve the expected effects of consuming alcohol, the more likely that consumption will take place (Cox & Klinger, 1988). Greater positive alcohol expectancies are predictive of more frequent drinking among college women (Williams & Ricciardelli, 1996; Madson et

al., 2013a; Moorer & Madson, 2010), and alcohol expectancies impact the degree to which drinking increases engagement in subsequent risky behaviors (Abbey et al., 2004; Benson, Gohm, & Gross 2007). Therefore, it is plausible that a better understanding of college women's alcohol expectancies may shed light on their alcohol behaviors and outcomes.

Beliefs about the effect of alcohol consumption on sexual behavior have been classified as sex-specific alcohol expectancies, and sex-specific alcohol expectancies have been found to be predictive of drinking behavior (Abbey, McAuslan, Ross, & Zawacki, 1999; Benson et al., 2007; Patrick & Maggs, 2009; Testa & Dermen, 1999). Dermen and Cooper (1994a) developed an empirically validated measure for assessing a broad range of sex-specific alcohol expectancies. Further, a confirmatory factor analysis revealed three distinct types of sex-specific alcohol expectancies: 1) sexual enhancement (e.g., "I enjoy sex more than usual"), 2) sexual risk-taking (e.g., "I am less likely to take precautions before having sex"), and 3) sexual disinhibition (e.g., "I am more likely to do sexual things that I wouldn't do when sober"; Dermen & Cooper, 1994a). During early psychometric analyses, Dermen and Cooper (1994a) found that individuals who scored higher on the sexual risk taking scale (i.e., believed that, after consuming alcohol, they would be less likely to take precautions before having sex) reported being less likely to consume alcohol in sexual situations; whereas, individuals who scored higher on the sexual enhancement scale (i.e., believed that, after consuming alcohol, they would have a more positive sexual encounter) reported being more likely to consume alcohol in sexual situations.

Sex-specific alcohol expectancies are also linked with alcohol-related consequences. Testa and Dermien (1999) found that sex-specific alcohol expectancies were positively correlated with experiences of alcohol-related sexual coercion, and Patrick and Maggs (2009) found that when individuals with stronger sex-specific alcohol expectancies consume more alcohol, they are more likely to experience negative sexual consequences after drinking than are individuals with weaker sex-specific alcohol expectancies. Additionally, Benson, Gohm, and Gross (2007) found that when a woman believes that alcohol reduces her inhibition, it is likely that she will experience the disinhibiting effects of alcohol to a greater degree than would a woman who did not hold that same expectation. Moreover, within dating relationships, Pederson, Lee, Larimer, and Neighbors (2009) found that participants who were actively dating drank significantly less than those not dating or in a serious relationship unless they held high sex-specific alcohol expectancies which put them at more risk for problematic drinking (i.e., beliefs that consuming alcohol would make sex more enjoyable). Considering these findings together, it is apparent that the effects of sex-specific alcohol expectancies are far reaching and increase college women's risk of experiencing more severe alcohol-related sexual consequences.

Sex-specific alcohol expectancies (e.g., decreased sexual inhibition, increased sexual enhancement, increased sexual risk-taking) have been linked with higher rates of alcohol consumption and more negative alcohol-related consequences among college women (Benson et al., 2007; Madson et al., 2013a; Moorer & Madson, 2010; Pederson et al., 2009; Williams & Ricciardelli, 1996). Additionally, sex-specific alcohol expectancies have been shown to be significant predictors of drinking behavior in

explicitly sexual situations (e.g., drinking before intercourse; Dermen & Cooper, 1994a). However, there is little research on how sex-specific alcohol expectancies relate to college women's use of safe drinking behaviors.

Because women appear to have an awareness of how their alcohol consumption presumably connects to their sexual behavior, it is important to examine to what extent their sex-specific alcohol expectancies are predictive of their use of safe drinking behaviors. For instance, multiple studies have demonstrated that both men and women view a woman as more sexually available if she is consuming alcohol (Abbey et al., 1996; Koss & Dinero, 1989). Not only does consuming alcohol increase a woman's likelihood of being perceived as more sexually available by others, but it also decreases her mental (e.g., impaired judgment) and physical capacity (e.g., behavioral impairment) to recognize and resist an assault (Testa & Parks, 1996). Due to the diminished capacity to think clearly, an intoxicated woman may engage in behavior (e.g., sexual activity) that otherwise would have been considered too risky or inappropriate (Davis et al, 2004; Testa & Parks, 1996; Testa et al., 2000). Moreover, college women have higher misperceptions of their peers' sexual behaviors than do college men (Lewis, Lee, Patrick, & Fossos, 2007; Lewis, Litt, Crouce, Blayney, & Gilmore, 2014). Specifically, college women tend to believe their peers (both male and female) are engaging in more risky sexual behavior (e.g., multiple sex partners) and less protective behavior (e.g., using a condom) than their peers actually report for themselves (Lewis et al., 2007; Lewis et al., 2014). Not surprisingly, women appear to have developed a great awareness of their vulnerabilities and a strong propensity to protect themselves against potential vulnerabilities (Delva et al., 2004), and college women regularly utilize drinking-specific protective strategies

(Benton et al., 2004; Delva et al., 2004; Moorer & Madson, 2010; Walters et al., 2007). However, little research has examined how sex-specific alcohol expectancies impact college women's use of protective behavioral strategies while drinking.

Protective Behavioral Strategies

Protective behavioral strategies (PBS) are a promising approach to reducing negative alcohol-related consequences. PBS are cognitive-behavioral strategies designed to reduce negative alcohol-related consequences (Martens, Taylor, Damann, Page, Mowry, & Cimini, 2004). PBS are active strategies that students can implement while drinking alcohol, such as alternating alcoholic and non-alcoholic beverages, drinking slowly rather than chugging or gulping, and having a designated driver (Benton, Schmidt, Newton, Shin, Benton, & Newton, 2004; Martens et al., 2004; Madson, Arnau, & Lambert, 2013). As behaviors that are within the students control, PBS have also been referred to as alcohol-specific self-regulatory behaviors (D'Lima, Pearson, & Kelley, 2012), behavioral self-control strategies (Werch, 1988), drinking control strategies (Sugarman & Carey, 2007), and alcohol reduction strategies (Bonar et al., 2011). While a single operationalized definition of PBS does not yet exist, there is a developing consensus regarding two distinct types of PBS— direct strategies that target limiting or controlling the amount of alcohol consumed (e.g., avoid drinking games, leave the bar at a predetermined time) and indirect strategies that target reduction of serious harm regardless of the amount of alcohol consumed (e.g., going home with a friend, having a designated driver, knowing where your drink is at all times; DeMartini, Palmer, Leeman, Corbin, Toll, Fucito, & O'Malley, 2013; Madson et al., 2013a; Moorer Madson, Nicholson, & Mohn, 2013; Pearson, 2013). There is increasing empirical support for the

use of PBS in college students to limit both alcohol consumption and reduce alcohol-related negative consequences (Araas & Adams, 2008; Borden et al., 2011; LaBrie, Lac, Kenney, & Mirza, 2011; Kenney & LaBrie, 2013; Madson & Zeigler-Hill, 2013).

Several studies have confirmed that college students who use more PBS while drinking also experience fewer negative alcohol-related consequences (Araas & Adams, 2008; Benton et al., 2004; Borden et al., 2011; Delva et al., 2004; LaBrie et al., 2011; Lewis et al., 2010; Martens et al., 2004; Martens et al., 2005; Zeigler-Hill, Madson, & Ricedorf, 2012). The majority of college students regularly employ at least one PBS while drinking, and that using multiple strategies is optimal for reducing negative alcohol-related consequences (Martens, 2004). For instance, Delva and colleagues (2004) found that individuals who used the fewest PBS were 6.5 times more likely to report negative alcohol-related consequences than those who used PBS more frequently. Likewise, Borden and colleagues (2011) found that college students who used the fewest PBS also had higher rates of alcohol consumption and negative alcohol-related consequences. Results from Benton et al. (2004), Lewis et al. (2010), and Martens et al. (2005) supported the inverse association between PBS and negative alcohol-related consequences even after controlling for the amount of alcohol consumed.

PBS play a vital role in understanding the links between alcohol consumption and various alcohol-related variables among college students. For instance, Martens, Pederson, LaBrie, Ferrier, and Cimini (2007) found that when college students drink for positively reinforcing reasons, they are less likely to utilize PBS that target limiting or controlling consumption, due to the idea that by reducing the amount of alcohol consumed they would also be reducing the anticipated positive outcomes. Madson,

Moorer, Zeigler-Hill, Bonnell, and Villarosa (2013b) found that college students who reported positive expectancies concerning alcohol use were less likely to use PBS and, therefore, more likely to consume greater amounts of alcohol and experience more negative alcohol-related consequences. Additionally, Madson et al. (2013b) found that the strength of the mediational effects of PBS in the association between positive expectancies and alcohol use differed based on gender. Specifically, PBS mediated the association that positive alcohol expectancies had with alcohol use and negative alcohol-related consequences only for female college students and not for male college students. Madson et al. (2013b) and Madson and Zeigler-Hill (2013) suggest that gender plays an important role in understanding the use of PBS and that differences in PBS use among men and women may be related to gender socialization.

The value of PBS extends beyond limiting overall negative alcohol-related consequences. For example, mounting empirical support suggests that PBS have value in limiting specific types of alcohol-related consequences, such as sex-related consequences (Lewis et al., 2010; Moorer et al., 2013). In relation to sex-related alcohol consequences among college students, Martens and colleagues (2004) found that PBS was negatively associated with unprotected sex, such that greater use of PBS was related to less engagement in unprotected sexual encounters. Additionally, Lewis and colleagues (2010) found that for college women, using PBS when drinking was related to increased use of condoms and birth control when engaging in consensual sexual acts; however, this was not true for college men and suggests that PBS may be of particular importance for college women. Moreover, Moorer and colleagues (2013) found that increased use of PBS resulted in fewer sex-related consequences, and that serious harm reduction

strategies (e.g., going home with a friend, knowing where your drink is at all times) may have a more prominent impact on reducing sexual victimization for college women who consume moderate to high amounts of alcohol. Thus, it appears that PBS in general as well as specific types of PBS are especially beneficial for reducing sex-related alcohol consequences among college women, who tend to be more sensitive to the need to protect themselves from sexual risk (Delva et al., 2004; Lewis et al., 2010; Oswalt et al., 2005).

As with other aspects of alcohol consumption, gender differences in regard to PBS use have been found. Howard, Griffin, Boekeloo, Lake, and Bellows (2007) found both similarities and differences in men and women's perceptions of PBS. Specifically, both men and women believed that eating before drinking was a helpful way to prevent overconsumption and that ensuring one person in the group stay sober to be crucial in preventing negative consequences. However, they also found that only women placed importance on keeping track of where their drink was and found it safer to go out in groups, particularly co-ed groups (Howard et al., 2007). Additionally, college women are more likely to use a designated driver and go home with a friend than are college men (Madson & Zeigler-Hill, 2013; Walters et al., 2007). Thus, researchers have consistently found that college women are more likely to use PBS than college men (Benton et al., 2004; Delva et al., 2004; Howard et al., 2007; Madson & Zeigler-Hill, 2013; Walters et al., 2007). Although prominent gender differences exist with regard to PBS use (Madson et al., 2013; Walters et al., 2007) and alcohol-related negative consequences, college women are beginning to consume alcohol at rates comparable to college men (Hoeppner et al., 2013; Johnston et al., 2013). As such, it would be beneficial to gain a more

comprehensive, and theory-driven understanding of gender-related predictors and mediators of alcohol-related behaviors and outcomes among college women.

Gendered Social Learning Theory

Theoretical Background

In order to introduce the theoretical framework for the current study, it is important to first consider Albert Bandura's seminal social learning theory, which explains human behavior in terms of a continuous, reciprocal interaction between cognitive (e.g., attention, memory), behavioral (e.g., skills, abilities), and environmental influences (e.g., social norms, social influence; Bandura, 1971). Further, Bandura's social learning theory emphasizes the importance of observational learning, modeling and imitation, and vicarious reinforcement. According to Bandura (1971), it is through observing others (i.e., behavioral models) that we learn what behaviors are associated with positive and/or negative consequences (and under what conditions). For example, Bandura's famous bobo doll experiment found that children would imitate a model's aggressive behavior if they saw the model be rewarded (or at least not punished); however, children would not imitate the model's aggressive behavior if they saw the model received punishment (Bandura, 1971). Thus, the process of vicarious reinforcement occurs as an individual learns what behavior is socially acceptable through observing other social models, and it is important to highlight that the same behavior may have vastly different consequences depending on the setting (or environment) in which it is performed.

Social learning theory offers a prominent perspective to viewing the development of alcohol expectancies and alcohol-related behaviors and outcomes. In fact, researchers

have referred to social learning theories as the “most significant theoretical influence in drug use etiology” (Scheier, 2010, p. 99). According to social learning theory (Bandura, 1977), expectancies towards alcohol develop from observing others—both directly and indirectly (e.g., television, movies) —and play an important role in understanding the associations between psychosocial factors and alcohol-related problems (Borsari, Murphy, & Barnett, 2007; Corbin, Iwamoto, & Fromme, 2011; LaBrie, Grant, & Hummer, 2011). Accordingly, individuals initially observe others being reinforced or punished after consuming alcohol and adopt similar drinking behaviors as a result.

Gendered social learning can be understood as a special case of social learning, and gendered behavior as behavior that emerges in contexts where gender plays a discriminative role (Bussey & Bandura, 1984). For instance, it is common for young girls to learn that certain behaviors (e.g. yelling), when performed in certain places (e.g., inside) are viewed as “unlady like” and may be followed by scolding from teachers or parents. Whereas, it is equally as common for young boys to learn that certain behaviors (e.g., crying) may be perceived as “girly” and provoke teasing from peers. Both of the aforementioned examples demonstrate how gender can serve as a discriminative stimulus that signals what behaviors are socially acceptable, for who, and under what circumstances. Moreover, Bussey and Bandura (1984) highlight that when exposed to multiple models, people are more likely to pattern their behaviors after a model of their same-sex and learn to behave in accordance with their same-sex model through a continuous process of direct and vicarious learning. In other words, through personal experience and through observing the consequences of others, people learn to behave in ways consistent with what society views as acceptable for their gender.

Gendered social learning theories posit that individuals develop behavior and context specific expectations when society teaches them what it means to be male and female (Addies et al., 2010; Smiler, 2004). Thus, women learn, from various outlets (e.g., parents, peers, media), how they are expected to behave when they drink alcohol and what behaviors are socially acceptable when they drink (Smith, Toadvine, & Kenney, 2009). Consistent with this perspective, research would benefit from exploring the extent to which college women's level of conformity to gender norms (both feminine and masculine) might predict harmful drinking patterns, use of PBS, and negative sex-related consequences. Moreover, in accordance with a gendered social learning theory framework, it would also be beneficial to explore the extent to which sex-specific alcohol-expectancies might mediate the relationship between conformity to gender norm and harmful drinking patterns, use of PBS, and negative sex-related consequences.

Conformity to Gender Norms

Based on an individual's sex, or their biological status of being male or female (World Health Organization, WHO, 2014), society socializes boys and girls in such a way that they acquire sex-specific self-concepts and personality attributes (Bem, 1981). Gender has been defined as socially constructed characteristics of women and men, such as norms and roles, and gender serves as a basic organizing principle for all human cultures. While aspects of sex are highly similar across cultures, aspects of gender may vary cross culturally (WHO, 2014). In general, society traditionally conceptualizes feminine gender norms as corresponding with characteristics of selflessness or emotionality, and masculine gender norms as corresponding with characteristics of self-

dependence and assertiveness (Berke, Sloan, Parrott, & Zeichner, 2012; McMullin, Wirth, & White, 2007; Spence & Helmreich, 1979).

Gender roles have been conceptualized as culturally enforced rules that outline appropriate behaviors for women and men (Brehm, Miller, Perlman, & Campbell, 2002), and the study of gender-role conformity—the extent to which an individual agrees with or abides by the gender expectations set upon them by their culture (Spence & Helmreich, 1979)—is both a historically (Bem, 1974; Spence & Helmreich, 1979; Spence, 1984) and currently (Berke et al., 2012; Iwamoto, Cheng, Lee, Takamatsu, & Gordon, 2011; Iwamoto, Corbin, Lejuez, & MacPherson, 2014; Iwamoto & Smiler, 2013; Green et al., 2008; Locke & Mahalik, 2005; Parent & Smiler, 2013; Sanchez & Flores, 2012; Smiler & Gelman, 2008) popular topic. Initially referred to as unidimensional constructs (i.e., high femininity assumed low masculinity, and vice versa), there is now little doubt that masculinity and femininity are multidimensional constructs (i.e., high femininity does not assume low masculinity, or that one can be high or low in both femininity and masculinity), and that both men and women can conform to both masculine and feminine norms (Bem, 1974; Smiler, 2006; Spence & Helmreich, 1979). This type of approach to understanding masculinity and femininity offers the potential advantage of a more complex, interpretable, and practically applicable relationship between components of conformity to gender norms and alcohol-related variables among college women.

The current findings on women's adherence to feminine and/or masculine norms paint a bleak picture for women's overall well-being, with increased adherence to both feminine and masculine norms being positively related to negative outcomes (Cahill &

Mussap, 2007; Sanchez & Flores, 2012; Snelle, Belk, & Hawkins, 1987). For instance, Sanchez and Flores (2012) found that even though men reported higher rates of alcohol consumption (and smoking cigarettes) than women, women reported higher rates of chronic diseases, and Snell, Belk, and Hawkins (1987) found that during stressful periods, women who endorsed traditional masculine gender norms were more likely to engage in alcohol and other substance use. The association between conformity to gender norms and alcohol use has been well documented in recent literature (Berke et al., 2012; Christie-Mizell & Peralta, 2009; Locke & Mahalik, 2005; Iwamoto, 2010; Sanchez & Flores, 2012); however, the majority of research has focused solely on the experiences of men (Berke et al., 2012; Locke & Mahilka, 2005). The few studies that have explored women's conformity to gender norms have only assessed their conformity to feminine norms (Christie-Mizell & Peralta, 2009; Sanchez & Flores, 2012). The majority of research on women's adherence to feminine norms supports an inverse relationship between adherence to traditional femininity and drinking frequency, as well as between adherence to traditional femininity and drinks per drinking occasion (Huselid & Cooper, 1992; Ricciardelli & Williams, 1995; Snell, Belk, & Hawkins, 1987). Looking at women's conformity to feminine gender norms in isolation (i.e., without simultaneously examining their conformity to masculine gender norms) fails to represent the multidimensional nature (i.e., that adherence to feminine norms does not preclude simultaneous adherence to masculine norms) of gender norms (Parent et al., 2013; Parent & Moradi, 2013; Smiler, 2004; Smiler, 2006). Thus, research that simultaneously examines women's level of conformity to both feminine and masculine gender norms as it relates to alcohol use is needed.

Given the lack of research on women's adherence to both feminine and masculine gender norms as related to alcohol-related constructs, examining how conformity to gender norms—both feminine and masculine—relates to sex-specific alcohol expectancies, harmful drinking patterns, PBS use, and alcohol-related risky sexual behavior and sexual victimization may provide insight into the social learning mechanisms (e.g., conformity to gender norms, sex-specific expectancies) predictive of college student drinking. Because gendered social learning theory's premise states that individuals develop context specific expectations for their behavior based on socially construed ideas of what is acceptable for their gender (Addies et al., 2010; Smiler, 2004), it makes sense to infer that an individual's level of conformity to gender norms (feminine and masculine) might help explain their beliefs about the combination of consuming alcohol and engaging in sexual activity (i.e., one's sex-specific alcohol expectancies), as well as their actual behaviors (e.g., harmful drinking patterns, PBS use). Moreover, using the gendered social learning theory as an overarching framework may provide a more comprehensive approach for determining how women's level of conformity to both feminine and masculine gender norms influences their sex-specific alcohol expectancies, alcohol consumption, PBS use, and alcohol-related sexual consequences (risky sexual behavior and sexual victimization).

Purpose of the Present Study

Considering the increasing prevalence of alcohol use by college women as evidenced by their exceeding the NIAAA established drinking guidelines (i.e., consuming more than seven standard drinks per week; Hoepner et al., 2013), it is important to better understand the social mechanisms predictive of these increases in

alcohol consumption among women, as well as to identify potential implications (e.g., negative consequences). Explicating the processes that may contribute to alcohol consumption, sex-specific alcohol expectancies, protective behavioral strategies, risky sexual behavior, and sexual victimization among college women can aid in identifying intervention targets that can enhance alcohol and sexual risk reduction and prevention programs. Thus, the primary aim of the current study is to test a path model that includes conformity to feminine and masculine gender norms and sex-specific alcohol expectancies in the prediction of harmful drinking patterns, PBS use, and alcohol-related sexual consequences through attempting to answer the following questions:

Question 1: To what extent does conformity to feminine norms predict harmful drinking patterns, protective behavioral strategies, alcohol-related risky sexual behavior, and alcohol-related sexual victimization in a sample of college women?

Hypothesis 1a: Because previous researchers found traditional femininity to be inversely related to alcohol consumption (Huselid & Cooper, 1992; Ricciardelli & Williams, 1995; Snell, Belk, & Hawkins, 1987), a direct link between conformity to feminine norms and harmful drinking patterns such that women with higher conformity to feminine norms would report less harmful drinking patterns was anticipated.

Hypothesis 1b: To the best of my knowledge, this is the first study to examine the link between conformity to feminine norms and use of protective behavioral strategies. Based on previous findings that traditional femininity is inversely related to alcohol consumption (Huselid & Cooper, 1992; Ricciardelli & Williams, 1995; Snell, Belk, & Hawkins, 1987) and that use of protective

behavioral strategies is inversely related to alcohol consumption (Araas & Adams, 2008; Benton et al., 2004; Borden et al., 2011; Delva et al., 2004; LaBrie et al., 2011; Lewis et al., 2010; Martens et al., 2004; Martens et al., 2005; Zeigler-Hill et al., 2012), it is anticipated that there will be an inverse direct relationship between conformity to feminine norms and use of protective behavioral strategies such that women with higher conformity to feminine norms would report greater use of protective behavioral strategies was hypothesized.

Hypothesis 1c: Given that traditional femininity is inversely related to alcohol consumption (Huselid & Cooper, 1992; Ricciardelli & Williams, 1995; Snell, Belk, & Hawkins, 1987) and that feminine norms stereotypically infer modesty and sexual fidelity (Parent & Moradi, 2010), it was anticipated that women with stronger conformity to feminine norms would report less alcohol-related risky sexual behavior.

Hypothesis 1d: Because conforming to traditional femininity is typically linked with non-problematic alcohol use (Huselid & Cooper, 1992; Ricciardelli & Williams, 1995; Snell, Belk, & Hawkins, 1987), it was anticipated that women with stronger conformity to feminine norms would report fewer overall alcohol-related consequences as well as fewer experiences of alcohol-related sexual victimization. Specifically, a direct link between conformity to feminine norms and alcohol-related sexual victimization was expected such that women with stronger conformity to feminine norms would report fewer experiences of alcohol-related sexual victimization.

Question 2: To what extent does conformity to masculine norms predict harmful drinking patterns, protective behavioral strategies, alcohol-related risky sexual behavior, and alcohol-related sexual victimization in a sample of college women?

Hypothesis 2a: A direct link between conformity to masculine norms and harmful drinking patterns such that women with stronger conformity to masculine norms would report more harmful drinking patterns was hypothesized. The rationale supporting this hypothesis is twofold—that masculine norms stereotypically infer risk-taking (Parent & Moradi, 2011) and that previous researchers have consistently found a positive relationship between traditional masculinity and alcohol use (Berke et al., 2012; Christie-Mizell & Peralta, 2009; Locke & Mahalik, 2005; Iwamoto et al., 2011 ; Sanchez & Flores, 2012).

Hypothesis 2b: To the best of my knowledge, this is the first study to assess the association between conformity to masculine norms and use of protective behavioral strategies among college women. Given the link between traditional masculinity and alcohol consumption (Iwamoto et al., 2011; Iwamoto & Smiler, 2013) coupled with the risk-taking attitude commonly associated with masculinity (Parent & Moradi, 2011; e.g., “Man-up”; Iwamoto et al., 2011), it was anticipated that there would be a direct link between conformity to masculine norms and protective behavioral strategies such that women with stronger conformity to masculine norms would report less use of protective behavioral strategies.

Hypothesis 2c: Based on the rationale that traditional masculinity infers a certain level of risk-taking behavior (Locke & Mahalik, 2005; Mahalik et al., 2003; Parent & Moradi, 2011), it was expected that there would be a direct link between

conformity to masculine norms and alcohol-related risky sexual behavior such that women with stronger conformity to masculine norms would report more engagement in alcohol-related risky sexual behavior.

Hypothesis 2d: Given the existent link between traditional masculinity and risk-taking behavior (Locke & Mahalik, 2005; Mahalik et al., 2003), it was believed that women who endorse masculine norms may be more prone to engage in harmful drinking patterns, less prone to utilize protective behavioral strategies when they drink, and therefore more likely to experience overall alcohol-related consequences when they drink, including more likely to experience alcohol-related sexual victimization. Thus, it was hypothesized that there would be a direct link between conformity to masculine norms and alcohol-related sexual victimization such that women with stronger conformity to masculine norms would report more experiences of alcohol-related sexual victimization.

Question 3: To what extent do sex-specific alcohol expectancies (sexual enhancement, sexual risk taking, and sexual disinhibition) mediate the relationships between gender norm conformity (feminine and masculine) and harmful drinking patterns, protective behavioral strategies, alcohol-related risky sexual behavior, and alcohol-related sexual victimization in a sample of college women?

Hypothesis 3a: The effect of conformity to feminine norms on harmful drinking patterns, protective behavioral strategies, alcohol-related risky sexual behavior, and alcohol-related sexual victimization will be partially mediated by sex-specific alcohol expectancies (sexual enhancement, sexual risk taking, and sexual disinhibition). Because this study is exploratory in nature and no previous study

has simultaneously assessed college women's conformity to feminine norms in relation to sex-specific alcohol expectancies, no hypotheses were made regarding the influence of each category of sex-specific alcohol expectancies.

Hypothesis 3b: The effect of conformity to masculine norms on harmful drinking patterns, protective behavioral strategies, alcohol-related risky sexual behavior, and alcohol-related sexual victimization will be partially mediated by sex-specific alcohol expectancies (sexual enhancement, sexual risk taking, and sexual disinhibition). Because this study is exploratory in nature and no previous study has simultaneously assessed college women's conformity to masculine norms in relation to sex-specific alcohol expectancies, no hypotheses were made regarding the influence of each category of sex-specific alcohol expectancies.

CHAPTER III

METHODOLOGY

Participants and Procedures

All methods and procedures implemented as part of the current study were approved by the university's Institutional Review Board (See Appendix A). Participants were 421 undergraduate women at a mid-sized public university in the southern region of the United States, who were enrolled in psychology courses and participated in return for partial fulfillment of a research participation requirement. Data for the current study were collected via Qualtrics, a secure online survey software. Potential participants were directed to the study's informed consent page (Appendix B) by accessing a link through the psychology department's research website (Sona Systems, Ltd.). Eligible participants must have identified as female, consumed alcohol at least once within the month prior to completing the survey, and been of traditional college age (i.e., 18-24 years old). The average age was 19.5 ($SD = 1.7$). The racial composition was as follows: 59% ($n = 246$) White non-Hispanic, 37% ($n = 155$) Black/African American, 3% ($n = 7$) Hispanic, and 3.8% ($n = 11$) Other; these demographics are representative of the racial composition of the university undergraduate student population from which the current sample was recruited. The majority of participants were freshmen (43%), 23% were sophomores, 19% were juniors, and 15% were seniors. After completing an online informed consent, participants were directed to the demographic questionnaire and study measures concerning their conformity to gender norms (feminine and masculine), sex-specific alcohol expectancies, alcohol consumption, harmful drinking patterns, use of protective behavioral strategies while drinking, and sex-related consequences (risky sexual behavior

and sexual victimization). All participants were initially directed to complete the demographic questionnaire and remaining measures were counterbalanced in order to minimize potential order effects. Those who qualified for participation and who completed at least fifty percent of each study measure received credit for partial fulfillment of a research participation requirement for a psychology course of their choice. It was estimated to take approximately 30-45 minutes to complete all study measures. To protect data integrity, three bogus items (i.e., validity check items) were sporadically placed throughout the survey to identify careless responding (Meade & Craig, 2012). Examples of bogus items include: “Leave this item unanswered,” and “Answer ‘never’ to this question.” Taking a conservative approach, participants were eliminated from the sample if they failed one or more bogus items ($n = 11$).

Measures

Demographic Questionnaire

Participants completed a demographic questionnaire that collected information about their race, age, and year in school (See Appendix C).

Conformity to Feminine Norms

The Conformity to Feminine Norms Inventory (CFNI-45; Parent & Moradi, 2010; see Appendix D) was used to assess respondents’ level of conformity to feminine gender norms. The CFNI-45 is a multidimensional self-report measure containing 45-items that are rated on a 4-point Likert type scale ranging from 0 (*Strongly disagree*) to 3 (*Strongly agree*). Example items include: “I believe that my friendships should be maintained at all costs” and “I spend more than 30 minutes a day doing my hair and makeup” (Parent & Moradi, 2010, p. 99). The total score was obtained by summing all relevant items, with

higher scores indicating greater conformity to feminine gender norms. The CFNI-45 is an abbreviated and psychometrically strengthened version of Mahalik, Morray, Ludlow, Coonerty-Femiano, Ludlow, Slattery, and Smiler's (2005) original scale that contained 84 items. Internal consistency for the total score was good with the current sample, with a Cronbach's alpha of .80, and the total score was used for all subsequent analyses. Convergent validity has been established by correlations between the original and abbreviated subscales ranging from $r = .87$ to $.97$.

Conformity to Masculine Norms

The Conformity to Masculine Norms Inventory (CMNI-46; Parent & Moradi, 2011; see Appendix E) was used to measure participants' level of conformity to traditional masculine gender norms. The CMNI-46 is a self-report questionnaire that contains 46 items rated on a 4-point Likert-type scale that ranges from 0 (*Strongly disagree*) to 3 (*Strongly agree*). Example items include: "I tend to keep my feelings to myself" and "In general, I will do anything to win" (Parent & Moradi, 2011, p. 342). The total score was obtained by summing all relevant items, with higher scores indicating greater conformity to masculine gender norms. It is important to note that some items are reverse scored. As with the CFNI-45, the CMNI-46 is an abbreviated and psychometrically strengthened version of the original scale developed by Mahalik, Locke, Ludlow, Diemer, Gottfried, and Freitas (2003). Convergent validity has been established by correlations between the original and abbreviated subscales ranging from $r = .89$ to $.98$. Additionally, a confirmatory factor analysis supported the nine-factor structure of the CMNI-46. Two questionable subscales from the original were removed

based on the confirmatory factor analysis (CFA), thus improving scale validity over the original scale (Parent & Moradi, 2011).

Numerous researchers have suggested that the constructs assessed by the CMNI-46 are not solely exclusive to men (Smiler, 2006; Tokar, Thompson, Plaufcan, & Williams, 2007). Moreover, Parent and Moradi (2013) recently conducted invariance testing to assess the basic factor structure and the magnitude of factor loadings of the CMNI-46 across gender groups. Their findings indicate that the CMNI-46 reflects essentially the same constructs among samples of both men and women. While men and women did differ in their level of endorsement of the items, overall invariance testing revealed that the CMNI-46 functions adequately as a measure of its intended constructs for both men and women. Further, Parent and Moradi (2013) found that the CMNI-46 is psychometrically valid for use with samples of women. Internal consistency of the CMNI-46 with Parent and Moradi's (2013) sample of women was acceptable, with Cronbach alpha scores all above .70. Internal consistency for the total score was good with the current sample, with a Cronbach alpha of .83, and the total score was used for all analyses.

Sex-Specific Alcohol Expectancies

The Sex-Specific Alcohol Expectancies Scale (SSAES; Dermen & Cooper, 1994b; see Appendix F) was used to measure individual beliefs about the potential effect of alcohol consumption on sexual behavior. The SSAES is an 18-item self-report questionnaire that asks participants to indicate the degree to which they believe alcohol influences how they feel and act sexually. The SSAES contains three distinct subscales, including (1) sexual enhancement expectancies (e.g., "After a few drinks of alcohol...I

am more sexually responsive”), (2) sexual risk taking expectancies (e.g., “After a few drinks of alcohol...I am less likely to use a condom”), and (3) sexual disinhibition expectancies (e.g., “After a few drinks of alcohol...I am more likely to do sexual things that I wouldn’t do when sober”). Participants respond to various items by indicating to what extent they agree with each statement; all items are scored on a Likert-type scale that ranges from 1 (*Strongly disagree*) to 6 (*Strongly agree*). Scores were obtained by summing all items on each subscale and then dividing by the number of items on that scale, with higher scores indicating stronger endorsement of sex-related alcohol expectancies. With a previous sample of college women, Cronbach’s alpha scores were .83 for the sexual enhancement subscale, .70 for the sexual risk subscale, and .79 for the sexual disinhibition subscale (Granato, 2012). Internal consistencies were good with the current sample, with Cronbach alpha scores of .90 for sexual enhancement, .85 for sexual risk taking, and .83 for sexual disinhibition. Convergent validity of the SSAES has been established with the Adolescent Alcohol Expectancy Scale ($r = .55, p < .01$; Christiansen, Goldman, & Inn, 1982), and predictive validity has been established with both global and domain-specific measures of alcohol use (Dermen & Cooper, 1994a).

Harmful Drinking Patterns

The Alcohol Use Disorders Identification Test (AUDIT; Saunders, Aasland, Babor, De La Fuente, & Grant, 1993; see Appendix G) will be used to measure harmful drinking patterns. The AUDIT is a 10-item self-report questionnaire that is commonly used for the detection of early-phase risky drinking patterns (e.g., Reinert & Allen, 2002). Example items include, “How often do you have six or more drinks on one occasion,” and “How often do you not remember what happened the night before after a night a

heavy drinking?” Internal consistency for the AUDIT total score for the current sample was adequate ($\alpha = .81$).

Protective Behavioral Strategies

The Protective Behavioral Strategies Scale-Revised (PBSS-R; Madson et al., 2013b; see Appendix H) will be used to assess participants' use of protective strategies while drinking alcohol. The PBSS-R is an 18-item, self-report questionnaire. All items are scored on a six point Likert-type scale that ranges from 1 (*Never*) to 6 (*Always*), and item responses are summed to obtain a total and two subscale scores. Participants respond to various behaviors by indicating how often they engage in the said behavior. There are 6 items that assess the subscale of serious harm reduction (SHR; e.g., “Use a designated driver” or “Know where you drink is at all times”) and 12 items that assess the subscale of controlled consumption (CC; e.g., “Determine not to exceed a set number of drinks” or “Drink slowly, rather than gulp or chug”). Total scores can range from 18-108, SHR scores range from 6-36, and CC scores can range from 12-72. Higher scores indicate more utilization of PBS. Internal consistency with the development sample was high, with Cronbach alpha scores ranging from .89-.91 for the total score, from .75-.84 for the SHR subscale, and from .88-.92 for the CC subscale (Madson et al., 2013). Convergent validity of the PBSS-R has been established with various measures of alcohol consumption and negative alcohol-related consequences (Madson et al., 2013b), and the PBSS-R has been used with similar samples of college students drinkers (Madson et al., 2013b; Moorer et al., 2013). Internal consistency for the total PBSS-R score, used for all subsequent analyses, was excellent for the current sample ($\alpha = .94$).

Alcohol-related Sexual Victimization

The Revised Sexual Experiences Survey- Long Form Victimization (SES-LFV; Koss et al., 2007; see Appendix I) is a self-report questionnaire that assesses unwanted sexual acts of aggression and victimization, including sexual coercion, assault, and rape. The SES-LFV contains 21-items, with seven items containing thirteen secondary questions, that asks participants to indicate whether or not they experienced a variety of unwanted sexual experiences during the past twelve months. Seven items on the SES-LFV (Koss et al., 2007) contain four separate response choices that are specific to alcohol-induced and/or alcohol-related sexual victimization, and because the current study focuses specifically on alcohol-related sexual victimization, only these 28-items were included in the total score used for subsequent analyses. The modified scoring method detailed above enabled the utilization of the golden standard measure for unwanted sexual experiences, The Revised Sexual Experiences Survey (Koss et al., 2007), without altering any language in the survey. Examples of alcohol-related items include, “Someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch or butt) or removed some of my clothes without my consent (but did not attempt sexual penetration) by taking advantage of me when I was too drunk or out of it to stop what was happening,” and “Even though it did not happen, someone tried to have oral sex with me, or make me have oral sex with them without my consent by using me sexually after I had been drinking alcohol and was conscious but too intoxicated (drunk) to give consent or stop what was happening.” The SES typically produces low internal consistencies ranging from .70-.75; however, no theoretical rationale requires a victim’s experiences to be necessarily be interrelated (Koss et al.,

2007). In other words, there is no reason to assume that any one incident of sexual victimization would be related to another; thus, internal consistency estimates are typically not applicable for this measure. However, because the current study utilized a modified version of the SES, wherein only alcohol-related items were included in the total score, internal consistency estimates were computed in order to provide evidence for psychometric reliability ($\alpha = .92$).

Alcohol-related Risky Sexual Behavior

The Young Adult Alcohol Problems Screening Test (YAAPST; Hurlbut & Sher, 1992; see Appendix J) will be used to assess engagement in risky sexual behavior resulting from alcohol consumption. The modified YAAPST will be used to compliment the SES by assessing risky sexual behavior (Lewis et al., 2010) and thus to provide a broader assessment of sex-related consequences. Items include: “Has drinking ever gotten you into sexual situations which you later regretted?” “Because you had been drinking, have you ever had sex when you really didn't want to,” “Because you had been drinking, have you ever had sex with someone you wouldn't ordinarily have sex with,” and “Because you have been drinking, have you neglected to use birth control or neglected to protect yourself from sexually transmitted diseases?” Participants respond using a 4-point Likert-type scale that ranges from 0 (*No, Never*) to 4 (*3 or more times in the past three months*). Higher scores indicate more frequent engagement in risky sexual behavior following the consumption of alcohol. Internal consistency for the four-item, modified YAAPST total score was adequate for the current sample ($\alpha = .83$).

Data Analytic Approach

Upon completion of the data collection phase, all data were subjected to review for diagnostics and data cleaning. Participants were eliminated from analyses if more than 25% of their responses were missing on any one of the study measures, any remaining missing data were subjected to linear trend at point imputation, and outliers were corrected through truncation. Accordingly, all study variables were examined for issues with skewness or kurtosis using the ± 3 standard deviations from the mean cutoff. Once all data were reviewed, means and standard deviations for all variables of interest were computed. Additionally, bivariate correlations were conducted to assess the relationships among all variables of interest. Internal consistencies were computed, where appropriate, via Cronbach's alpha in order to ensure construct validity with the current sample. To test the first two research questions and related hypotheses, path analysis was conducted to evaluate the relationships between: (a) conformity to feminine norms and harmful drinking patterns, protective behavioral strategies, alcohol-related risky sexual behavior, and alcohol-related sexual victimization, and (b) conformity to masculine norms and harmful drinking patterns, protective behavioral strategies, alcohol-related risky sexual behavior, and alcohol-related sexual victimization. Figure 1 illustrates the first proposed path model that was used to answer research questions one and two. Each relationship was examined to determine if the actual paths were consistent with those hypothesized. Hypotheses for questions one and two were supported if the direct effects between independent (conformity to feminine norms and conformity to masculine norms) and dependent (harmful drinking patterns, protective behavioral

strategies, alcohol-related risky sexual behavior, and alcohol-related sexual victimization) variables were significant.

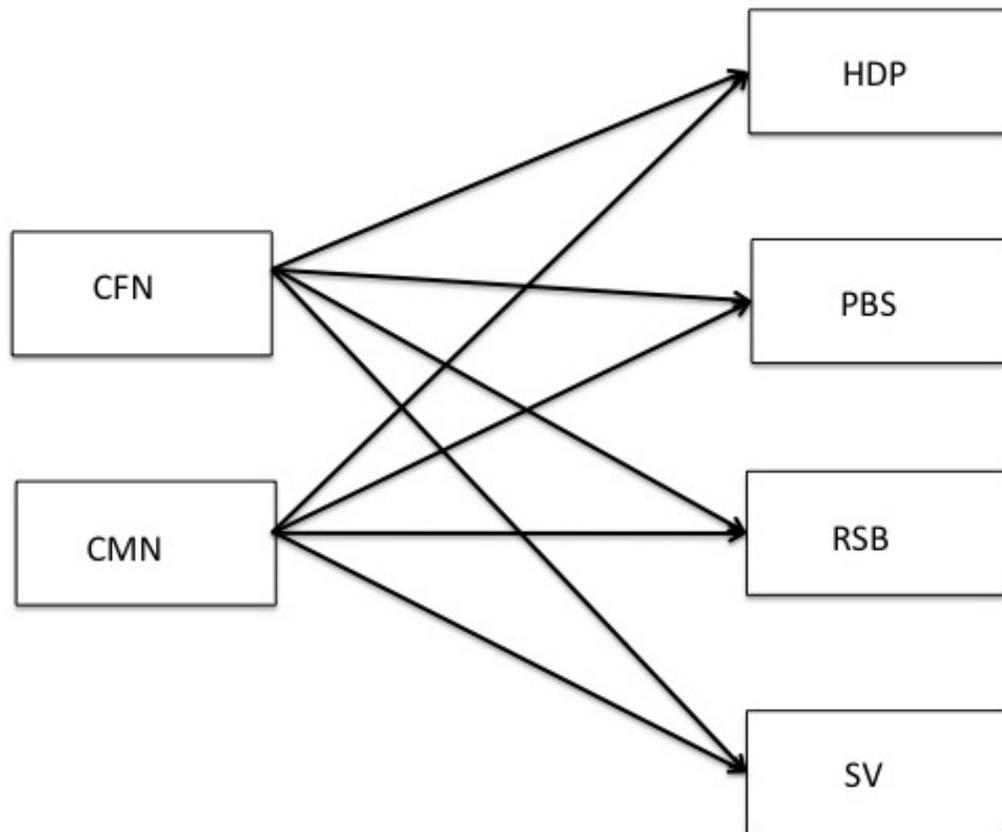


Figure 1. Proposed Path Model of CFN and CMN as predictor variables, and HDP, PBS, RSB, and SV as outcome variables. Notes: CFN-conformity to feminine norms; CMN-conformity to masculine norms; HDP-harmful drinking patterns; PBS-protective behavioral strategies; RSB- alcohol-related risky sexual behavior; SV-alcohol-related sexual victimization

In order to examine the third research question and associated hypotheses, a multiple mediation analysis was conducted using a structural equation model (SEM) framework through the statistical software program Mplus 7.11 (Muthen & Muthen, 2012). There are several advantages to using SEM including: ability to statistically test the variables simultaneously in order to view the impact of the variables on each other,

ability to determine the reciprocal relationships among influential factors, and the ability of the error term to represent the influences of all variables (Meyers et al., 2013). The major advantage of using a SEM framework is the ability to test a single model with multiple outcome variables, while being able to account for the variance shared among variables. Figure 2 illustrates the proposed path model with the addition of sex-specific alcohol expectancies as a mediator between the predictor variables of conformity to feminine and masculine norms and the outcomes variables of harmful drinking patterns, protective behavioral strategies, risky sexual behavior, and sexual victimization.

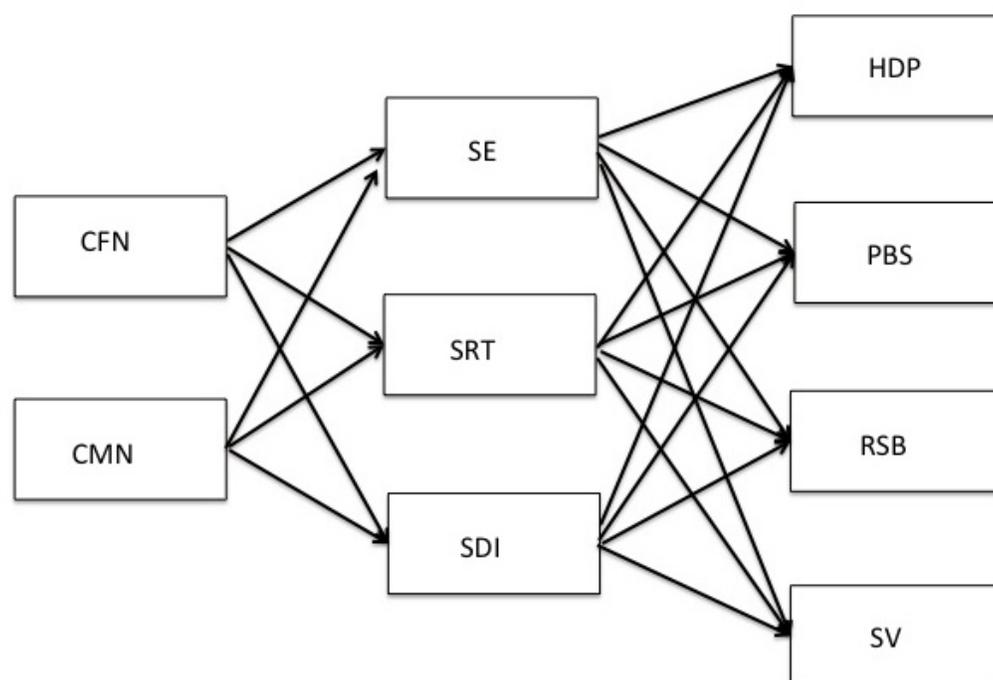


Figure 2. Proposed Path Model with SE, SRT, and SDI as mediators between CFN/CMN and HDP, PBS, RSB, and SV. Notes: CFN-conformity to feminine norms; CMN-conformity to masculine norms; SE- sexual enhancement; SRT- sexual risk taking; SDI-sexual disinhibition; HDP-harmful drinking patterns; PBS-protective behavioral strategies; RSB-alcohol-related risky sexual behavior; SV-alcohol-related sexual victimization

In order to correct for skewed data, Preacher and Hayes (2004) recommend using a bootstrapping technique to conduct the multiple mediation analysis. Bootstrapping is a nonparametric approach to effect size estimation that makes no assumptions about the shape of the distribution of the sample. Our bootstrapping technique consisted of the extraction of 5,000 random resamples, with the mediational effect being calculated for each of these resamples. If partial mediation exists, the percent mediated will also be obtained (i.e., the percentage of variance in each outcome variable accounted for by the mediator) by multiplying the products of path *a* and path *b* and dividing by path *c* for each mediator (Preacher & Hayes, 2004). Only partial mediations were hypothesized, as full mediation would require the direct relationship between the predictor and criterion variables to reduce to zero with the inclusion of the mediating variable, and partial mediation requires only a reduction in the strength of the relationship between predictor and criterion (Baron & Kenny, 1986). Due to the exploratory nature of the current study, mixed findings regarding previous studies on conformity to gender norms and alcohol-related outcomes and the ability to simultaneously examine effects among multiple predictor, criterion, and mediating variables within an SEM framework, the four alcohol-related outcome variables were kept separate in the mediation model.

CHAPTER IV

RESULTS

Prior to constructing and analyzing the structural equation models, all data underwent a cleaning process that screened for outliers and missing items. Initially, 451 female undergraduates met the inclusion criteria of being of traditional college age (i.e., 18-25 years old) and indicating that they had consumed alcohol at least once over the course of the 30 days preceding survey completion. However, thirty participants were eliminated due to failure to respond correctly to validity items ($n = 11$) or having endorsed “yes” to consuming alcohol at least once in the past month (i.e., per the screening items to ensure inclusion criteria were met), but endorsed consuming zero drinks per week during a typical week ($n = 19$). Thus, the final sample consisted of 421 female undergraduate drinkers.

Means, standard deviations and intercorrelations for all variables of interest are presented in Table 1. Participants reported drinking an average of 9.88 standard drinks per week ($SD = 9.37$). The majority of participants were classified as moderate drinkers ($n = 201$ [48%]) with 101 participants (24%) classified as infrequent drinkers and 120 participants (28%) classified as heavy drinkers (Collins et al., 1985). In line with DeMartini and Carey’s (2012) recommendations for detecting at-risk drinkers in a college setting, a cut-off score of 5 on the consumption subscale of the Alcohol Use Disorders Identification Test (AUDIT-C; Saunders et al., 1993) is used for females. With this guideline in mind, over one-third of the current sample (31%; $n = 129$) met or exceeded the cut-off for at-risk drinking as determined by AUDIT-C scores.

Table 1

Means, Standard Deviations, and Intercorrelations of Measures

	1	2	3	4	5	6	7	8	9
1. CFN	----								
2. CMN	-.34**	----							
3. SSAE-SE	.07	.01	----						
4. SSAE-SRT	-.22**	.21**	.38**	----					
5. SSAE-SDI	-.16**	.20**	.46**	.78**	----				
6. HDP	-.09	.11*	.24**	.26**	.33**	----			
7. PBS	.18**	-.17**	-.16**	-.25**	-.29**	-.49**	----		
8. RSB	-.07	.04	.22**	.34**	.39**	.42**	-.28**	----	
9. SV	-.08	.05	.11*	.16**	.24**	.27**	-.20**	.32**	----
<i>Mean</i>	81.64	59.96	12.34	7.34	7.73	6.12	76.41	5.69	0.5
<i>Standard Deviation</i>	11.86	12.49	3.85	2.87	2.86	4.71	20.90	2.88	1.8

Note. CFN = Conformity to Feminine Norms, CMN = Conformity to Masculine Norms, SSAE-SE = Sexual Enhancement Expectancies, SSAE-SRT = Sexual Risk Taking Expectancies, SSAE-SDI = Sexual Disinhibition Expectancies, HDP = Harmful Drinking Patterns, PBS = Protective Behavioral Strategies, RSB = Alcohol-related Risky Sexual Behavior, SV = Alcohol-related Sexual Victimization.

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

The top five most commonly endorsed PBS were “Know where your drink has been at all times” ($M = 5.35, SD = 1.33$), “Avoid mixing alcohol with prescription drugs” ($M = 5.25, SD = 1.45$), “Know what you are drinking” ($M = 5.24, SD = 1.24$), “Avoid getting into a car with someone who has been drinking” ($M = 5.15, SD = 1.37$), and “Use a designated driver” ($M = 5.04, SD = 1.49$). It is of note that all of the top five most commonly endorsed PBS are serious harm reduction (SHR) strategies. Moreover, a single sample t-test was then conducted in order to determine which type of PBS—SHR (i.e., serious harm reduction strategies) or CC (i.e., controlled consumption strategies)—was more commonly endorsed by the current sample of college women. As such, the single sample t-test revealed that participants used significantly more serious harm reduction strategies than controlled consumption strategies [$t(420) = 97.45, p < .001$]. Overall, the current sample reported the use of PBS in comparable amounts to similar studies among college students (Martens et al., 2008; Moorer et al., 2013).

The most commonly reported experiences of alcohol-related sexual victimization (including sexual coercion, assault, and rape) as measured by the Revised Sexual Experiences Survey- Long Form Victimization (SES-LFV; Koss et al., 2007), were “Someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch or butt) or removed some of my clothes without my consent (*but did not attempt sexual penetration*) by using me sexually after I had been drinking alcohol and was conscious but too intoxicated (drunk) to give consent or stop what was happening,” “Someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch or butt) or removed some of my clothes without my consent (*but did not attempt sexual penetration*) by encouraging or pressuring me to drink alcohol

until I was too intoxicated (drunk) to give consent or stop what was happening,” “Someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch or butt) or removed some of my clothes without my consent (*but did not attempt sexual penetration*) by serving me high alcohol content drinks when they appeared to be regular strength drinks until I was too intoxicated (drunk) to give consent or stop what was happening,” “A man put his penis into my vagina, or someone inserted fingers or objects without my consent by using me sexually after I had been drinking alcohol and was conscious but too intoxicated (drunk) to give consent or stop what was happening,” and “A man put his penis into my vagina, or someone inserted fingers or objects without my consent by serving me high alcohol content drinks when they appeared to be regular strength drinks until I was too intoxicated (drunk) to give consent or stop what was happening.”

The most commonly reported alcohol-related risky sexual behavior, as measured by a modified version of the Young Adult Alcohol Problem Screening Test (YAAPST; Hurlbut & Sher, 1992; Leiws et al., 2010), were “Because you had been drinking, have you ever had sex with someone you wouldn’t ordinarily have sex with” ($M = 3.14$, $SD = 1.22$), “Because you had been drinking, have you ever had sex when you really didn’t want to” ($M = 2.29$, $SD = 1.12$), “Has drinking ever gotten you into sexual situations you later regretted,” ($M = 1.34$, $SD = 0.79$), and “Because you had been drinking, have you ever neglected to use birth control or neglected to protect yourself from sexually transmitted diseases” ($M = 1.05$, $SD = 0.31$).

Conformity to feminine norms had a significant negative correlation with conformity to masculine norms ($r = -.34$, $p < .01$), sexual risk taking expectancies ($r = -$

.22, $p < .01$) sexual disinhibition expectancies ($r = -.16, p < .01$), as well as a positive association with protective behavioral strategies ($r = .18, p < .01$). The correlations between conformity to feminine norms and alcohol-related risky sexual behavior and alcohol-related sexual victimization were non-significant. Further, conformity to masculine norms had positive associations with sexual risk taking expectancies ($r = .21, p < .01$) and sexual disinhibition expectancies ($r = .20, p < .01$), as well as a negative correlation with protective behavioral strategies ($r = -.17, p < .01$). Sexual enhancement expectancies had a positive correlation with harmful drinking patterns ($r = .24, p < .01$), alcohol-related risky sexual behavior ($r = .22, p < .01$), and alcohol-related sexual victimization ($r = .11, p < .05$), as well as a negative association with protective behavioral strategies ($r = -.16, p < .01$). Sexual risk taking expectancies had a positive correlation with harmful drinking patterns, ($r = .26, p < .01$), alcohol-related risky sexual behavior ($r = .34, p < .01$), and alcohol-related sexual victimization ($r = .16, p < .01$), as well as a negative association with protective behavioral strategies ($r = -.25, p < .01$).

Similar to the other two categories of sex-specific alcohol expectancies, sexual disinhibition expectancies had a positive correlation with harmful drinking patterns, ($r = .33, p < .01$), alcohol-related risky sexual behavior ($r = .39, p < .01$), and alcohol-related sexual victimization ($r = .24, p < .01$), as well as a negative association with protective behavioral strategies ($r = -.29, p < .01$). Harmful drinking patterns had a positive correlation with alcohol-related risky sexual behavior ($r = .42, p < .01$) and alcohol-related sexual victimization ($r = .27, p < .01$), as well as a negative association with protective behavioral strategies ($r = -.49, p < .01$). Protective behavioral strategies had a negative correlation with alcohol-related risky sexual behavior ($r = -.28, p < .01$) and

alcohol-related sexual victimization ($r = -.20, p < .01$). Finally, alcohol-related risky sexual behavior had a positive correlation with alcohol-related sexual victimization ($r = .32, p < .01$).

Structural Equation Model

Global fit statistics

The multiple-mediation model examined in the current study included conformity to feminine norms and conformity to masculine norms as the predictor variables, four different alcohol-related criterion variables (i.e., harmful drinking patterns, PBS use, alcohol-related risky sexual behavior, and alcohol-related sexual victimization), and the three categories of sex-specific alcohol expectancies entered as mediators. All significant effects are displayed in Figure 3. The model contains zero degrees of freedom, which is attributable to correlating the disturbance terms of the three sex-specific alcohol expectancies, and also among the four alcohol-related criterion variables; such a model is often referred to as just identified, wherein the parameter estimates are identified, but global fit statistics are not reportable.

Because it makes theoretical sense for the mediator and outcome variables to have moderate to strong correlations among themselves, it is reasonable to account for these relationships in the path model. The correlations among the three sex-specific alcohol expectancies and four alcohol-related outcome variables are presented in Table 2.

Table 2

Model Correlations for three sex-specific alcohol expectancies and the four alcohol-related outcomes

Sex-specific Alcohol Expectancies	1	2	3	4
1. Sexual Enhancement	---			
2. Sexual Risk Taking	.38	---		
3. Sexual Disinhibition	.46	.78	---	
Alcohol-related Outcomes	1	2	3	4
1. HDP	---			
2. PBS	-.49	---		
3. RSB	.42	-.28	---	
4. SV	.27	-.20	.32	---

Note. All correlation coefficients are significant ($p < .01$), and provide justification for correlating the three sex-specific alcohol expectancies and the four alcohol-related outcome variables in the conceptual model. HDP = Harmful Drinking Patterns, PBS = Protective Behavioral Strategies, RSB = Alcohol-related Risky Sexual Behavior, SV = Alcohol-related Sexual Victimization.

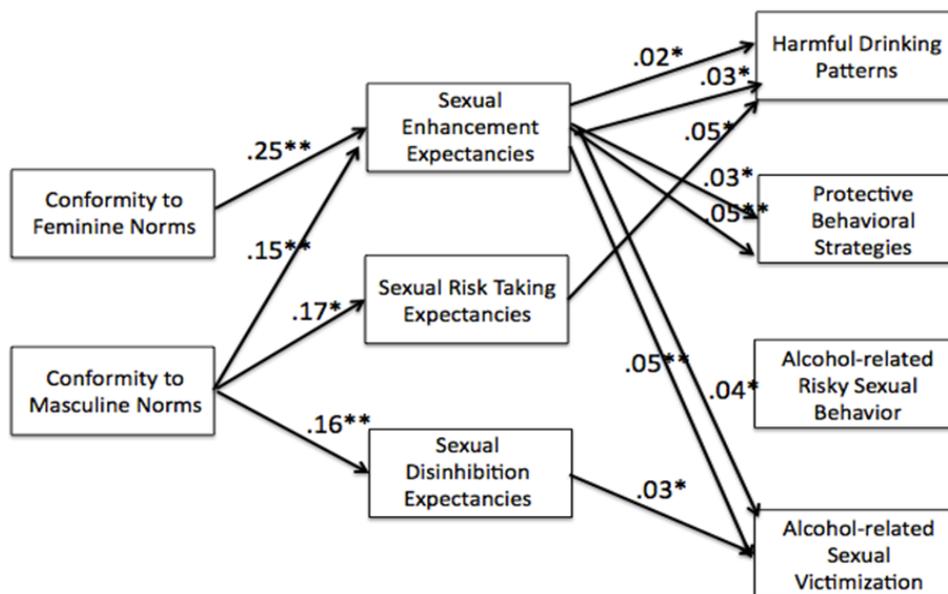


Figure 3. Observed model with only the significant relationships between conformity to feminine and masculine norms, sex-specific alcohol expectancies, and alcohol-related outcome variables. Correlations between the three sex-related alcohol expectancies and the four alcohol-related outcome variables are not included in the model for parsimony, but they are provided in Table 2. ** $p < .01$, * $p < .05$.

Conformity to Feminine Norms and Harmful Drinking Patterns

The first set of parameters examined the mediating effects of the three sex-specific alcohol expectancies on the relationship between conformity to feminine norms and harmful drinking patterns. Although the total and direct relationship between conformity to feminine norms and harmful drinking patterns was not significant ($c = -.03$, *ns* and $c' = -.02$, *ns*, respectively; see Table 3), there was a significant indirect relationship found with sexual enhancement expectancies ($\beta = .02$, $p < .05$, see Figure 3).

Specifically, conformity to feminine norms predicted an increase in sexual enhancement expectancies ($a = .11, p < .05$) and sexual enhancement expectancies predicted an increase in harmful drinking patterns ($b = .17, p < .001$). In line with the bootstrapping technique, a significant indirect effect is apparent when the confidence interval does not contain zero, CI [.02, .14]. These results suggest that sexual enhancement expectancies have an indirect effect on the relationship between conformity to feminine norms and harmful drinking patterns.

Conformity to Feminine Norms and Use of Protective Behavioral Strategies

The second set of parameters examined the mediating effects of the three sex-specific alcohol expectancies on the relationship between conformity to feminine norms and use of protective behavioral strategies (PBS). Although the total and direct relationship between conformity to feminine norms and PBS was not significant ($c = -.02, ns$ and $c' = .01, ns$, respectively; see Table 3), there was a significant indirect relationship found with sexual enhancement expectancies ($\beta = .03, p = .02$, see Figure 3). Specifically, conformity to feminine norms predicted an increase in sexual enhancement expectancies ($a = .11, p < .05$) and sexual enhancement expectancies predicted an increase in PBS ($b = .30, p < .001$). Again, the 95% confidence interval did not contain a zero, CI [.04, .05], which indicates a significant indirect effect. These results suggest that sexual enhancement expectancies have an indirect effect on the relationship between conformity to feminine norms and PBS.

Conformity to Feminine norms and Alcohol-related Risky Sexual behavior

The third set of parameters examined the mediating effects of the three sex-specific alcohol expectancies on the relationship between conformity to feminine norms

and alcohol-related risky sexual behavior. Contrary to the initial prediction that conformity to feminine norms would be directly related to alcohol-related sexual behavior, the total and direct relationships between conformity to feminine norms and alcohol-related risky sexual behavior were not significant ($c = -.02, ns$ and $c' = .01, ns$, respectively; see Table 3), and there were no significant indirect relationships found with any of the sex-specific alcohol expectancies.

Conformity to Feminine Norms and Alcohol-related Sexual Victimization

The fourth set of parameters examined the mediating effects of the three sex-specific alcohol expectancies on the relationship between conformity to feminine norms and alcohol-related sexual victimization. Contrary to the initial prediction that conformity to feminine norms would be directly related to alcohol-related sexual victimization, the total and direct relationships between conformity to feminine norms and alcohol-related sexual victimization were not significant ($c = -.01, ns$ and $c' = .02, ns$, respectively; see Table 3). However, in support of the initial hypothesis that sex-specific alcohol expectancies would partially mediate the relationship between conformity to feminine norms and alcohol-related sexual victimization, there was a significant indirect relationship found with sexual enhancement expectancies ($\beta = .04, p = .01$, see Figure 3). Specifically, conformity to feminine norms predicted an increase in sexual enhancement expectancies ($a = .11, p < .05$) and sexual enhancement expectancies predicted an increase in alcohol-related sexual victimization ($b = .35, p < .001$). Because the 95% confidence interval did not contain a zero, CI [.01, .07], there is evidence of a significant indirect effect. These results suggest that sexual enhancement expectancies have an

indirect effect on the relationship between conformity to feminine norms and alcohol-related sexual victimization.

Conformity to Masculine Norms and Harmful Drinking Patterns

The fifth set of parameters examined the mediating effects of the three sex-specific alcohol expectancies on the relationship between conformity to masculine norms and harmful drinking patterns. Contrary to the initial prediction that conformity to masculine norms would be directly related to more harmful drinking patterns, both the total and direct relationships between conformity to masculine norms and harmful drinking patterns were not significant ($c = .06, ns$ and $c' = -.02, ns$, respectively; see Table 3). However, in support of the initial hypothesis that sex-specific alcohol expectancies would partially mediate the relationship between conformity to masculine norms and harmful drinking patterns, there was a significant indirect relationship found with sexual enhancement expectancies ($\beta = .03, p = .02$, see Figure 3). Specifically, conformity to masculine norms predicted an increase in sexual enhancement expectancies ($a = .16, p < .01$), and sexual enhancement expectancies predicted an increase in harmful drinking patterns ($b = .17, p < .001$). Again, the 95% confidence interval did not contain a zero, CI [.001, .03], which indicates a significant indirect effect. There was also a significant indirect relationship found with sexual risk taking expectancies ($\beta = .05, p < .05$, see Figure 3), such that conformity to masculine norms predicted an increase in sexual risk taking expectancies ($a = .14, p < .05$), and sexual risk taking expectancies predicted an increase in harmful drinking patterns ($b = .39, p < .001$). A significant indirect effect is evident due to the 95% confidence interval not containing zero, CI [.004, .10]. These results suggest that, as predicted, sexual enhancement and sexual risk taking

expectancies have indirect effects on the relationship between conformity to masculine norms and harmful drinking patterns.

Conformity to Masculine Norms and Use of Protective Behavioral Strategies

The sixth set of parameters examined the mediating effects of the three sex-specific alcohol expectancies on the relationship between conformity to masculine norms and use of protective behavioral strategies (PBS). There was a significant direct relationship between conformity to masculine norms and PBS; however, in contrast to the initial prediction that conformity to masculine norms would be directly related to less PBS use, results indicated that conformity to masculine norms actually predicted an increase in PBS ($c' = .16, p < .001$). The total effect from conformity to masculine norms to PBS was $c = .22, p < .001$. Additionally, in support of initial predictions, there was a significant indirect relationship found with sexual enhancement expectancies ($\beta = .05, p = .01$, see Figure 3). Specifically, conformity to masculine norms predicted an increase in sexual enhancement expectancies ($a = .16, p < .01$) and sexual enhancement expectancies predicted an increase in PBS ($b = .30, p < .001$). Again, the 95% confidence interval did not contain a zero, CI [.01, .08], which indicates a significant indirect effect. These results suggest that sexual enhancement expectancies have an indirect effect on the relationship between conformity to masculine norms and PBS. In line with recommendations by Sobel (1982), the proportion of the total effect that is mediated was obtained by calculating the indirect to direct effects. As such, sexual enhancement expectancies accounted for 20.83% of the total effect from conformity to masculine norms to PBS.

Conformity to Masculine Norms and Alcohol-related Risky Sexual Behavior

The seventh set of parameters examined the mediating effects of the three sex-specific alcohol expectancies on the relationship between conformity to masculine norms and alcohol-related risky sexual behavior. As predicted, there was a significant direct relationship between conformity to masculine norms and alcohol-related risky sexual behavior such that conformity to masculine norms predicted an increase in alcohol-related risky sexual behavior ($c' = .26, p < .001$), and the total effect from conformity to masculine norms to alcohol-related risky sexual behavior was $c = .28, p < .001$. However, there were no significant indirect relationships found among the three sex-specific alcohol expectancies. Thus, while there is a direct relationship between conformity to masculine norms and alcohol-related risky sexual behavior (i.e., those with higher conformity to masculine norms are more likely to engage in alcohol-related risky sexual behavior), sex-specific alcohol expectancies did not account for any of the relationship.

Conformity to Masculine Norms and Alcohol-related Sexual Victimization

The final set of parameters examined the mediating effects of the three sex-specific alcohol expectancies on the relationship between conformity to masculine norms and alcohol-related sexual victimization. Although the total and direct relationship between conformity to masculine norms and alcohol-related sexual victimization was not significant ($c = .17, ns$ and $c' = .07, ns$, respectively; see Table 3), there was a significant indirect relationship found with sexual enhancement expectancies ($\beta = .05, p = .01$, see Figure 3). Specifically, conformity to masculine norms predicted an increase in sexual enhancement expectancies ($a = .16, p < .01$) and sexual enhancement expectancies predicted an increase in alcohol-related sexual victimization ($b = .35, p < .001$). Again,

the 95% confidence interval did not contain a zero, CI [.01, .09], which indicates a significant indirect effect. There was also a significant indirect relationship found with sexual disinhibition expectancies ($\beta = .03, p < .05$, see Figure 3), such that conformity to masculine norms predicted an increase in sexual disinhibition expectancies ($a = .17, p < .01$) and sexual disinhibition expectancies predicted an increase in alcohol-related sexual victimization ($b = .15, p < .01$). A significant indirect effect is evident due to the 95% confidence interval not containing zero, CI [.001, .05]. These results suggest that both sexual enhancement and sexual disinhibition expectancies have an indirect effect on the relationship between conformity to masculine norms and alcohol-related sexual victimization.

Table 3

Total, Direct, and Indirect Effects of Conformity to Gender Norms on Alcohol-related Outcomes

Dependent variable	<u>HDP</u>		<u>PBS</u>		<u>RSB</u>		<u>SV</u>	
	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>	β	<i>p</i>
Independent Variable: CFN								
Total Effect	-.02	.92	.04	.81	.16	.22	.04	.73
Direct Effect	-.12	.50	-.05	.75	.11	.41	-.03	.82
Total Indirect	.10	.24	.08	.05	.05	.18	.07	.13
Specific Indirect Effects								
Sexual Enhancement	.06	.04	.08	.02	.03	.24	.08	.02
Sexual Risk Taking	.04	.55	.01	.62	.01	.64	.01	.62
Sexual Disinhibition	-.00	.83	-.01	.55	.01	.48	-.03	.16
Independent Variable: CMN								
Total Effect	.09	.33	.24	.00	.37	.00	.16	.00
Direct Effect	-.03	.68	.17	.00	.35	.00	.07	.15
Total Indirect	.12	.01	.07	.01	.02	.39	.09	.00
Specific Indirect Effects								
Sexual Enhancement	.04	.01	.05	.01	.02	.19	.05	.01
Sexual Risk Taking	.08	.04	.01	.20	.02	.26	.01	.19
Sexual Disinhibition	.004	.80	.01	.50	-.01	.39	.02	.04

Note. All parameter estimates and significance test are based on 5000 bootstrapped samples. Significant effects ($p < .05$) are bolded. CFN = Conformity to Feminine Norms, CMN = Conformity to Masculine Norms, HDP = Harmful Drinking Patterns, PBS = Protective Behavioral Strategies, RSB = Alcohol-related Risky Sexual Behavior, SV = Alcohol-related Sexual Victimization.

CHAPTER V

DISCUSSION

This study was unique in that, to the best of my knowledge, it was the first to examine the applicability of the gendered social learning model of alcohol use, proposed by Iwamoto and colleagues (2013), to a sample of college women drinkers. Although the gendered social learning model infers a causal theory, it is important to note that the current study was exploratory in nature and was not intended to test the causal aspects of the theory. The overarching goal of the current study was to determine whether the gendered social learning model is plausible for explaining college women's alcohol-related behavior and outcomes. As such, I sought to identify the relationships between level of conformity to feminine and masculine gender norms and harmful drinking patterns, protective behavioral strategies, alcohol-related risky sexual behavior, and alcohol-related sexual victimization among college women who drink alcohol, as well as to identify the mediating effects of sex-specific alcohol expectancies.

My first objective was to identify the extent to which conformity to feminine gender norms predicted harmful drinking patterns, use of protective behavioral strategies, alcohol-related risky sexual behavior, and alcohol-related sexual victimization. In support of initial hypotheses, higher conformity to feminine gender norms was associated with greater use of protective behavioral strategies. However, contrary to predictions, conformity to feminine gender norms was not associated with harmful drinking patterns, alcohol-related risky sexual behavior, or alcohol-related sexual victimization. Although only approaching statistical significance, it is notable that the correlation between conformity to feminine norms and harmful drinking patterns was negative, which does

support the direction of the predicted relationship. The current finding that higher endorsement of feminine gender norms was inversely related to endorsement of harmful drinking patterns is supported by previous studies that found traditional femininity to be linked with less frequent drinking and fewer drinks per drinking occasion (Huselid & Cooper, 1992; Ricciardelli & Williams, 1995; Snell, Belk, & Hawkins, 1987).

My second objective was to identify the extent to which conformity to masculine gender norms predicted harmful drinking patterns, use of protective behavioral strategies, alcohol-related risky sexual behavior, and alcohol-related sexual victimization. In support of initial hypotheses, there was a direct link between conformity to masculine gender norms and alcohol-related risky sexual behavior, such that women who endorsed higher conformity to masculine norms also reported more engagement in alcohol-related risky sexual behavior. When considering that higher conformity to masculine norms indicates an increased likelihood of engaging in risky and potentially self-destructive behavior (Iwamoto et al., 2011; Iwamoto et al., 2014; Iwamoto & Smiler, 2013; Snell et al. 1987), it is not surprising that college women with higher conformity to masculine norms would also be more apt to engage in alcohol-related risky sexual behavior (e.g., forgetting to wear a condom, having casual sex). Thus, higher conformity to masculine norms among the women in our sample increased the chances that they also had engaged in alcohol-related risky sexual behavior within the past year.

Previous researchers have posited that college students and, in particular, college women may consume alcohol as a way to facilitate sexual behavior (Coleman & Carter, 2005; Kiene, Barta, Tennen, & Armeli, 2009; Massie, 2013; Patrick & Maggs, 2009; Ven & Beck, 2009). For instance, Ven and Beck (2009) found that college students, both

male and female, reported consuming alcohol prior to sexually “hooking up” as a way to neutralize feelings of guilt, shame, or anxiety surrounding their sexual behavior. Further, Massie (2013) argued that college students may view alcohol intoxication as a way to justify their sexual behavior, and given that behavioral expectations regarding gender are more strongly enforced for Southern women than they are for men or women in other regions of the United States (Guerra, Suito, Mecom, & Gusman, 2003; Suito & Carter, 1999), it seems that the unique influences of Southern culture must be considered when interpreting and/or attempting to generalize the current findings.

Although it has been suggested that alcohol may serve as an “excuse in a bottle” for college students to engage in sexual behavior (Patrick & Maggs, 2009, p. 472), there appear to be important cultural factors that may exacerbate feelings of guilt surrounding sexual behavior for college women in the South. For instance, in a study that examined regional differences in gender-role attitudes among adults over age eighteen, Guerra and colleagues (2003) found that both Black and White women in the South held significantly more traditional gender-role attitudes than did northern women. In other words, while women in the North seemed to embrace more egalitarian gender-role attitudes (i.e., able to conform to both feminine and masculine gender norms), women in the South seemed to receive more pressure to conform to traditionally feminine gender norms (i.e., conforming to feminine norms over masculine norms). Guerra and colleagues (2003) also pointed out that both Black and White women who endorsed high religiosity held significantly more traditional gender-role attitudes. Because of the prominence of religiosity in the South, it seems possible that college women with high religiosity may experience stronger feelings of guilt, shame, or anxiety if their behavior is incongruent

with traditional feminine norms, or behavior that would be viewed as “ladylike.” Moreover, increased feelings of guilt or anxiety surrounding sexual behavior may contribute to viewing the disinhibiting effects of alcohol as advantageous or beneficial rather than risky or potentially dangerous (Ven & Beck, 2009), and it has been proposed that college women may consume alcohol in order to give themselves permission to engage in sexual behavior (Benson et al., 2007; Dermen & Cooper, 1994). In a sense, alcohol is perceived as a mechanism that temporarily disables culturally mandated behavior. As such, higher conformity to masculine norms coupled with alcohol consumption among Southern women may mitigate the guilt or anxiety of deviating from culturally enforced gender norms (i.e., engaging in behaviors viewed by one’s cultural as “unladylike”).

In terms of the direct link found between conformity to masculine gender norms and protective behavioral strategies, women who endorsed higher conformity to masculine norms also reported greater use of protective behavioral strategies, which was contrary to our initial predictions. When considering that college women consistently report greater use of alcohol-related protective behavioral strategies than do college men (Benton et al., 2004; Delva et al., 2004; Howard et al., 2007; Madson & Zeigler-Hill, 2013; Walters et al., 2007), it seems plausible that college women, regardless of their level of conformity to feminine and/or masculine norms, may be utilizing PBS at relatively high rates. It is also possible that women’s conformity to certain aspects of masculine norms, such as level of self-reliance, may have more influence than other aspects of masculinity, such as attitudes toward winning, on their use of PBS. For instance, women with higher levels of independence (i.e., self-reliance) may implement

PBS with greater frequency due to an internalized value and/or need for self-protection. Examining the distinct subtypes of masculinity was outside the scope of the current study, and it is suggested that future research dismantle masculine norms when exploring college women's level of conformity to both feminine and masculine gender norms.

Inconsistent with initial hypotheses, no direct link was found between conformity to masculine gender norms and harmful drinking patterns. Perhaps the unexpected finding regarding the lack of association between masculine norms and harmful drinking is an artifact of our methodology around gender norm conformity. Our rationale for looking at conformity to overall masculine norms and overall feminine norms was based on the exploratory nature of the study. By taking a top-down approach, we wanted to examine conformity to feminine norms and conformity to masculine norms as global constructs before examining distinct subcategories or controlling for potential overlap. However, the current results are confounded in that they inhibit any inferences about the relationships among gender norms and alcohol-related outcomes for women who endorsed high levels of conformity to both feminine norms and masculine norms. Moreover, four categories of gender role identity have been proposed in previous research, including (1) masculine, when one conforms high to masculine norms and low to feminine norms, (2) feminine, when one conforms high to feminine norms and low to masculine norms, (3) undifferentiated, when one conforms low to both feminine and masculine norms, and (4) androgynous, when one conforms high to both feminine and masculine norms (Bem, 1974; Onorati, 2013). Individuals categorized as androgynous (i.e., high femininity, high masculinity) or feminine (i.e., high femininity, low masculinity) have been found to consume less alcohol than individuals categorized as

masculine (i.e., high masculinity, low femininity) or undifferentiated (i.e., low femininity, low masculinity; Shifren & Bauserman, 1996). Thus, the lack of relationship between conformity to masculine norms and harmful drinking patterns among the current sample of college women may be a product of not examining the four possible combinations of gender norm conformity. It is also possible that examining the relationship between college women's conformity to masculine norms and alternative measures of alcohol consumption, such as heavy episodic drinking or typical weekly drinking (versus solely looking at harmful drinking patterns), may produce contrasting results than those found in the current study.

Finally, our third objective was to examine the mediating effects of three sex-specific alcohol expectancies on the associations between conformity to gender norms—feminine and masculine—and harmful drinking patterns, protective behavioral strategies, alcohol-related risky sexual behavior, and alcohol-related sexual victimization among college women who drink alcohol. Although there were no direct relationships between conformity to feminine norms and harmful drinking patterns or alcohol-related sexual victimization, it appears that college women who reported higher conformity to feminine norms also reported stronger endorsement of sexual enhancement expectancies. Current results indicated that higher conformity to feminine norms was associated with greater sexual enhancement expectancies; however, higher conformity to feminine norms was associated with less endorsement of overall sex-specific alcohol expectancies, which is consistent with previous findings (Smith et al., 2009) and suggests that there is something unique about the category of sexual enhancement alcohol expectancies. Moreover, the mediating effect of sexual enhancement expectancies revealed that college women who

endorse sexual enhancement expectancies are reporting more harmful drinking patterns and more experiences of alcohol-related sexual victimization.

One potential explanation for the mediating effect of sexual enhancement expectancies in the association between conformity to feminine norms and harmful drinking patterns and alcohol-related sexual victimization is that sexual enhancement expectancies (e.g., “After a few drinks of alcohol, I am more sexually responsive” or “After a few drinks of alcohol, I enjoy sex more”) may be perceived as positive expectancies, or desired outcomes of consuming alcohol; whereas, sexual risk taking (e.g., “I am less likely to use a condom”) and sexual disinhibition (e.g., “I am more likely to do sexual things that I wouldn’t do when sober”) may be perceived as negative expectancies, or undesirable drinking outcomes. Further, Patel and Fromme (2010) suggested that the immediate consequences of positive expectancies have a greater impact on actual drinking behavior than do negative expectancies, and multiple studies have shown that college women who endorse greater positive alcohol expectancies also report higher rates of drinking alcohol (Williams & Ricciardelli, 1996; Madson et al., 2013a; Moorer & Madson, 2010). Even though college women who endorse high conformity to feminine norms typically engage in less harmful and/or frequent drinking (Huselid & Cooper, 1992; Ricciardelli & Williams, 1995; Snell et al., 1987), when they hold stronger sexual enhancement expectancies, they do appear to be engaging in more problematic drinking. Moreover, Messman-Moore, Ward, and DeNardi (2013) found that sexual enhancement alcohol expectancies were positively correlated with risky behaviors such as heavy episodic drinking and likelihood of engaging in alcohol-related sexual behavior (i.e., having sex while intoxicated), and that these risky behaviors were

positively correlated with alcohol-involved rape. Therefore, believing that alcohol enhances the sexual experience may increase the likelihood of heavy drinking and engaging in alcohol-related sexual behavior, which would subsequently increase the risk of experiencing alcohol-related sexual victimization.

Current results are consistent with findings from Pumphrey-Gordon and Gross (2007) that greater endorsement of sex-specific alcohol expectancies was related to more experiences of sexual victimization, as well as to decreased resistance to unwanted sexual advances. It has been suggested that when college women possess strong sex-specific alcohol expectancies (i.e., strongly believe that consuming alcohol influences their sexual behavior), they may be more strongly influenced by the disinhibitory effects of alcohol (Benson et al., 2007; Pumphrey-Gordon & Gross, 2007), and may feel that after having a few drinks they have little power to act assertively during sexual interactions (Pumphrey-Gordon & Gross, 2007; Testa & Dermen, 1999). Moreover, Zerubavel and Messman-Moore (2013) defined sexual assertiveness as, “Being able to recognize, prioritize, and express one’s own limits, needs, and desires in a sexual situation” (p. 1519), and culturally enforced gender norms regarding sexual behavior tend to portray men as being dominant and women as being passive (Zerubavel & Messman-Moore, 2013). Therefore, if a woman is high in conformity to feminine norms, she may stereotypically be less sexually assertive by nature, and may therefore be more at risk for experiencing alcohol-related sexual victimization if she holds strong sex-specific alcohol expectancies.

In contrast to the direct effects between conformity to feminine norms and sex-specific alcohol expectancies, higher conformity to masculine norms was associated with greater endorsement of all three types of sex-specific alcohol expectancies (e.g., sexual

enhancement, sexual risk taking, and sexual disinhibition). When considering that previous research has demonstrated a positive correlation between conformity to masculine norms and risky behaviors (e.g., heavy alcohol use, risky sexual behavior; Cahill & Mussap, 2007; Sanchez & Flores, 2012; Snelle, Belk, & Hawkins, 1987), and a positive correlation between sex-specific alcohol expectancies and risky sexual behavior (Benson et al., 2007; Messman-Moore et al., 2013; Patrick & Maggs, 2009), it seems consistent that conformity to masculine norms would be associated with greater endorsement of sex-specific alcohol expectancies. The possible presence of synergistic effects between high conformity to masculine norms and strong endorsement of sex-specific alcohol-expectancies may exacerbate a woman's likelihood of experiencing sex-related consequences (e.g., alcohol-related risky sexual behavior, alcohol-related sexual victimization) after drinking alcohol.

The current findings provide important implications for prevention and intervention efforts targeting alcohol-related harm and risky sexual behavior among college women. Specifically, incorporating sex-specific alcohol expectancies and, in particular, sexual enhancement expectancies into discussions around safe drinking and related sexual behavior may prove beneficial. In addition, discussions around safe drinking and related sexual behavior may be tailored according to individual conformity to feminine and masculine norms. Programs such as the Brief Alcohol Screening and Intervention for College Students (BASICS; Dimeff, Baer, Kivlahan, & Marlatt, 1999) may benefit from including discussions on the influence of conformity to feminine and masculine gender norms on sex-specific alcohol expectancies, as well as on how sex-specific expectancies may relate to their drinking motives and resulting behaviors. For

instance, if a student indicates that they are high in conformity to feminine norms and that they hold strong sexual enhancement alcohol expectancies, motivational enhancement strategies might be used to identify what specific protective strategies (whether alcohol or sex related, or both) are in line with their drinking motives and/or goals. Taking this example one step further, if a student were to identify one of their drinking goals as being related to increased comfort and/or confidence with casual sex or approaching potential romantic partners, discussion could then center on eliciting the student's knowledge around keeping themselves safe and collaboratively identifying potential barriers to using protective strategies (e.g., discomfort with discussing contraceptives or sexual health with potential sexual partners). Incorporating sexual assertiveness skills training (Zerubavel & Messman-Moore, 2013) into existent alcohol-related interventions, as well as into sexual health campaigns are additional recommendations for taking an empowerment-based approach to campus-wide prevention and intervention efforts.

While the current findings are promising and informative, it is important to interpret the current results in light of the study's potential limitations. First, as with any single sample study, the generalizability of the current findings may be limited due to data being collected from a single mid-sized public university in the southern region of the United States. Because college students in the southeastern region of the United States tend to consume less alcohol than other parts of the country (Johnston et al., 2014), it would be beneficial to replicate this study with college samples from more prominent alcohol consuming populations. Second, although the racial breakdown of the current sample is reflective of the overall undergraduate student population of the university, it is important to consider that the current sample is predominantly White, non-Hispanic and

African American, which limits generalizability and supports the need for continued research with more diverse samples of college students. On a related note, regional variations in definitions of masculinity and femininity, as well as in the extent to which these definitions are enforced, support the need for conducting similar research in other regions of the United States. As such, it will be important for future studies to replicate and extend the current findings with more diverse—ethnically/racially, level of socioeconomic status, regionally—samples of college students.

Another potential limitation is the overreliance on retrospective self-report measures, especially given the sensitive nature of certain survey items (e.g., questions asking about specific sexual behaviors). Reliance on self-report measures may have resulted in underreporting by our sample. Although researchers have determined that computer-based surveys, such as those administered in the current study, have been found to reduce reporting biases when assessing for stigmatized behaviors such as alcohol use and sexual behavior (Simoes, Batos, Moreira, Lynch, & Metzger, 2006), it is possible the current sample might be especially subject to social desirability (e.g., denying behaviors seen as promiscuous) due to modest values and beliefs related gender and cultural socialization. Future researchers may consider extending the current methodology by adding a qualitative component to allow for more open-ended, potentially enlightening responses; such a study could be used to identify how participants react to sensitive items on self-report measures such as the Sexual Experiences Survey (Koss et al., 2007).

A final limitation is the cross-sectional design of the current study, which prevents causal inferences from being made. A longitudinal study could gather data from each student at various points in time, which would allow for the measurement of

changes in conformity to feminine and masculine gender norms and alcohol-related outcomes over time. Further, a longitudinal study has the potential to further elucidate on the directionality of the associations among gender norm conformity, sex-specific alcohol expectancies, and alcohol-related outcomes. Conducting a micro-longitudinal study, such as one that utilizes a daily diary design, would allow researchers to gain a better understanding of the underlying processes contributing to the dynamic relationship between gender norms, sex-specific alcohol expectancies, and alcohol-related sexual consequences.

The results of the current study also suggest areas for further investigation. Future research should consider dismantling conformity to feminine and masculine norms into the contributing subscales in effort to better understand what specific gender norms (e.g., risk-taking, emotional control) might predict college women's harmful drinking patterns, use of PBS, and sex-related negative consequences. Additionally, due to disparate findings depending on the type of PBS examined (Moorer et al., 2013; Pearson, 2013), it would be beneficial to dismantle PBS into the two distinct subtypes—controlled consumption strategies (CC; i.e., direct strategies) and serious harm reduction strategies (SHR; i.e., indirect strategies), in order to determine if the current findings apply to both CC and SHR. Finally, as the first study to assess the links of conformity to feminine and masculine norms on college women's sex-specific alcohol expectancies, harmful drinking patterns, PBS, alcohol-related risky sexual behavior, and alcohol-related sexual victimization, additional research is needed to better understand the role of conformity to gender norms and sex-specific alcohol expectancies on college women's alcohol- and sex-related behaviors. For instance, invariance testing could be used to assess the degree

to which current findings are consistent across race. Future research might also consider identifying the role of other psychosocial variables such as religious and/or spiritual affiliation (or level of religious and/or spiritual commitment), as well as the role of other alcohol-related variables such as the drinking context and individual drinking motives. Because previous research has determined that relationship status plays an important role in the association between sex-specific alcohol expectancies and alcohol-related behavior, such that college women actively dating but not in a committed relationship were found to endorse the highest sex-specific alcohol expectancies (Pedersen, Lee, Larimer, & Neighbors, 2009), further investigation is needed to determine the impact of relationship status on the associations among gender norm conformity, sex-specific alcohol expectancies, and alcohol-related outcomes.

In conclusion, the current study extends research examining college women's drinking by demonstrating the mediating effects of sex-specific alcohol expectancies in explaining the link between conformity to feminine and masculine gender norms and four alcohol-related outcomes—harmful drinking patterns, protective behavioral strategies, alcohol-related risky sexual behavior, and alcohol-related sexual victimization. Moreover, the findings highlight the mediational effect of sexual enhancement expectancies in better understanding the relationship between conformity to feminine and masculine norms and college women's alcohol-related behavior. Current results support the importance of considering the role of conformity to gender norms and sex-specific alcohol expectancies in harm reduction efforts for college students.

APPENDIX A

INSTITUTIONAL REVIEW BOARD APPROVAL FORM

**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**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: 14072104

PROJECT TITLE: Predictors of Alcohol Consumption, Use of Protective Behavioral Strategies, and Alcohol-Related Sexual Consequences: A Gendered Social Learning Perspective

PROJECT TYPE: New Project

RESEARCHER(S): Kayla Moorer

COLLEGE/DIVISION: College of Education and Psychology

DEPARTMENT: Psychology

FUNDING AGENCY/SPONSOR: N/A

IRB COMMITTEE ACTION: Expedited Review Approval

PERIOD OF APPROVAL: 07/22/2014 to 07/21/2015

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

APPENDIX B

INFORMED CONSENT

Consent is hereby given to participate in the study titled: Alcohol and Sex-Related Behaviors

PURPOSE: The present study is designated to examine the association between personality and college women's alcohol and sex-related behaviors. Results will be used to guide later research on promoting healthy behaviors among 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 30-45 minutes and participants will receive 1 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 your participation. However, it is hoped that this study will contribute to our understanding of personality.

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 internet-based questionnaires for SONA credit. 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 at professional conferences or journals 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 Kayla Moorer at kayla.moorer@eagles.usm.edu or her research supervisor Dr. Michael 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. A copy of this form will be given to the participant.

If you become distressed as a result of your participation in this study, then you should contact an agency on-campus or in the surrounding community that may be able to provide services for you. A partial list of available resources is provided below:

University of Southern Mississippi Counseling Center (601) 266-4829

Community Counseling & Assessment Clinic (601) 266-4601

Pine Belt Mental Healthcare (601) 544-4641

Pine Grove Recovery Center (800) 821-7399

Forrest General Psychology Services (601) 288-4900

Lifeway Counseling Service Incorporated (601) 268-3159

Behavioral Health Center (601) 268-5026 Hope Center (601) 264-0890

If you experience distress as a result of your participation in this study, please notify Dr. Michael Madson (michael.madson@usm.edu).

APPENDIX C

DEMOGRAPHIC QUESTIONNAIRE

1. What is your gender?
 - a. Female
 - b. Male

2. How old are you?
 - a. 18
 - b. 19
 - c. 20
 - d. 21
 - e. 22
 - f. 23
 - g. 24

3. Have you drunk alcohol at least once in the past 30 days?
 - a. Yes
 - b. No

4. What is your current academic status?
 - a. Freshman
 - b. Sophomore
 - c. Junior
 - d. Senior

5. What is your racial/ethnic background?
 - a. White
 - b. Black/ African American
 - c. Hispanic
 - d. American Indian or Alaska Native
 - e. Asian
 - f. Native Hawaiian or Other Pacific Islander
 - g. Other

APPENDIX D

CONFORMITY TO FEMININE NORMS INVENTORY (CFMNI-45)

Thinking about your own actions, feelings and beliefs, please indicate how much personally agree or disagree with each statement by circling SD for “Strongly disagree,” D for “Disagree,” A for “Agree,” or SA for “Strongly agree” to the right of each statement. There are no right or wrong responses to the statements. You should give the responses that most accurately describe your personal actions, feelings and beliefs. It is best if you respond with your first impression when answering.

[Response scale: Strongly Disagree—Disagree—Agree—Strongly Agree]

1. I would be happier if I was thinner
2. It is important to keep your living space clean
3. I spend more than 30 minutes a day doing my hair and make-up
4. I tell everyone about my accomplishments
5. I clean my home on a regular basis
6. I feel attractive without make-up
7. I believe that my friendships should be maintained at all costs
8. I find children annoying
9. I would feel guilty if I had a one-night stand
10. When I succeed, I tell my friends about it
11. Having a romantic relationship is essential in life
12. I enjoy spending time making my living space look nice
13. Being nice to others is extremely important
14. I regularly wear make-up
15. I don't go out of my way to keep in touch with friends
16. Most people enjoy children more than I do
17. I would like to lose a few pounds
18. It is not necessary to be in a committed relationship to have sex
19. I hate telling people about my accomplishments
20. I get ready in the morning without looking in the mirror very much
21. I would feel burdened if I had to maintain a lot of friendships
22. I would feel comfortable having casual sex
23. I make it a point to get together with my friends regularly
24. I always downplay my achievements
25. Being in a romantic relationship is important
26. I don't care if my living space looks messy
27. I never wear make-up
28. I always try to make people feel special
29. I am not afraid to tell people about my achievements
30. My life plans do not rely on my having a romantic relationship
31. I always try to lose weight
32. I would only have sex with the person I love
33. When I have a romantic relationship, I enjoy focusing my energies on it

34. There is no point to cleaning because things will get dirty again
35. I am not afraid to hurt people's feelings to get what I want
36. Taking care of children is extremely fulfilling
37. I would be perfectly happy with myself even if I gained weight
38. If I were single, my life would be complete without a partner
39. I rarely go out of my way to act nice
40. I actively avoid children
41. I am terrified of gaining weight
42. I would only have sex if I was in a committed relationship life marriage
43. I like being around children
44. I don't feel guilty if I lose contact with a friend
45. I would be ashamed if someone thought I was mean

APPENDIX E

CONFORMITY TO MASCULINE NORMS INVENTORY (CMNI-46)

Thinking about your own actions, feelings and beliefs, please indicate how much you personally agree or disagree with each statement by circling SD for “Strongly disagree,” D for “Disagree,” A for “Agree,” or SA for “Strongly agree” to the right of each statement. There are not right or wrong responses to the statements. You should give the responses that most accurately describe your personal actions, feelings and beliefs. It is best if you respond with your impression when answering.

[Response scale: Strongly Disagree—Disagree—Agree—Strongly Agree]

1. In general, I will do anything to win
2. If I could, I would frequently change sexual partners
3. I hate asking for help
4. I believe that violence is never justified
5. Being thought of as gay is not a bad thing
6. In general, I do not like risky situations
7. Winning is not my first priority
8. I enjoy taking risks
9. I am disgusted by any kind of violence
10. I ask for help when I need it
11. My work is the most important part of my life
12. I would only have sex if I was in a committed relationship
13. I bring up my feelings when talking to others
14. I would be furious if someone thought I was gay
15. I don't mind losing
16. I take risks
17. It would not bother me at all if someone thought I was gay
18. I never share my feelings
19. Sometimes violent action is necessary
20. In general, I control the women in my life
21. I would feel good if I had many sexual partners
22. It is important for me to win
23. I don't like giving all my attention to work
24. It would be awful if people thought I was gay
25. I like to talk about my feelings
26. I never ask for help
27. More often than not, losing does not bother me
28. I frequently put myself in risky situations
29. Women should be subservient to men
30. I am willing to get into a physical fight if necessary
31. I feel good when work is my first priority
32. I tend to keep my feelings to myself
33. Winning is not important to me

34. Violence is almost never justified
35. I am happiest when I'm risking danger
36. It would be enjoyable to date more than one person at a time
37. I would feel uncomfortable if someone thought I was gay
38. I am not ashamed to ask for help
39. Work comes first
40. I tend to share feelings
41. No matter what the situation, I would never act violently
42. Things tend to be better when men are in charge
43. It bothers me when I have to ask for help
44. I love it when men are in charge of women
45. I hate it when people ask me to talk about my feelings
46. I try to avoid being perceived as gay

APPENDIX F

SEX-SPECIFIC ALCOHOL EXPECTANCIES SCALE (SSAES)

Many people believe that alcohol can influence how they feel and act sexually. We would like to know how you think having a few drinks of alcohol affects your sexual feelings and behavior.

[Response scale: Strongly Disagree—Disagree—Agree—Strongly Agree]

After a few drinks of alcohol...

1. I feel closer to a sexual partner.
2. I am more sexually responsive.
3. I am less nervous about sex.
4. I am less likely to use birth control.
5. I have sex with people whom I wouldn't have sex with if I were sober.
6. I enjoy sex more than usual.
7. I am a better lover.
8. I am less likely to take precautions before having sex.
9. I am less likely to talk with a new sexual partner about whether he has a sexually transmitted disease, like AIDS or gonorrhea.
10. I am more likely to do sexual things that I wouldn't do when sober.
11. I find it harder to say no to sexual advances.
12. I am less likely use or ask a partner to use a condom.
13. I am more likely to have sex on ad first date.

APPENDIX G

ALCOHOL USE DISORDERS IDENTIFICATION TEST (AUDIT)

1. How often do you have a drink containing alcohol?
 - a. Never
 - b. Monthly or less
 - c. 2 to 4 times a month
 - d. 2 to 3 times a week
 - e. 4 or more times a week
2. How many drinks containing alcohol do you have on a typical day when you are drinking?
 - a. 1 or 2
 - b. 3 or 4
 - c. 5 or 6
 - d. 7 to 9
 - e. 10 or more
3. How often do you have six or more drinks on one occasion?
 - a. Never
 - b. Less than monthly
 - c. Monthly
 - d. Weekly
 - e. Daily or almost daily
4. How often during the last year have you found that you were not able to stop drinking once you started?
 - a. Never
 - b. Less than monthly
 - c. Monthly
 - d. Weekly
 - e. Daily or almost daily
5. How often during the last year have you failed to do what was normally expected from you because of drinking?
 - a. Never
 - b. Less than monthly
 - c. Monthly
 - d. Weekly
 - e. Daily or almost daily
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?
 - a. Never
 - b. Less than monthly
 - c. Monthly
 - d. Weekly
 - e. Daily or almost daily
7. How often during the last year have you had a feeling of guilt or remorse after drinking?

- a. Monthly
 - b. Less than monthly
 - c. Monthly
 - d. Weekly
 - e. Daily or almost daily
8. How often during the last year have you been unable to remember what happened the night before because you had been drinking?
- a. Never
 - b. Less than monthly
 - c. Monthly
 - d. Weekly
 - e. Daily or almost daily
9. Have you or someone else been injured as a result of your drinking?
- a. No
 - b. Yes, but not in the last year
 - c. Yes, during the last year
10. Has a relative or friend, or doctor or other health provider been concerned about your drinking or suggest that you cut down?
- a. No
 - b. Yes, but not in the last year
 - c. Yes, during the last year

APPENDIX H

PROTECTIVE BEHAVIORAL STRATEGIES SCALE—REVISED (PBSS-R)

Please indicate the degree to which you engage in the following behaviors to keep yourself safe when using alcohol or “partying.”

[Response scale: Never—Rarely—Occasionally—Sometimes—Usually—Always]

1. Use a designated driver
2. Determine not to exceed a set number of drinks
3. Alternate alcoholic and non-alcoholic drinks
4. Have a friend let you know when you have had enough to drink
5. Avoid drinking games
6. Leave the bar/party at a predetermined time
7. Make sure that you go home with a friend
8. Know where your drink has been at all times
9. Avoid drinking shots of liquor
10. Stop drinking at a predetermined time
11. Drink water while drinking alcohol
12. Put extra ice in your drink
13. Avoid mixing different types of alcohol
14. Drink slowly rather than gulp or chug
15. Avoid trying to “keep up” or “out drink” others
16. Avoid getting into a car with someone who has been drinking
17. Always know what you are drinking
18. Avoid mixing alcohol with prescription drugs (whether prescribed or not)

APPENDIX I

SEXUAL EXPERIENCES SURVEY—LONG FORM VICTIMIZATION
(SES-LFV)

The following questions concern sexual experiences that you may have had that were unwanted. We know that these are personal questions, so your responses are stored separately from your identifying information. Your information is completely confidential. We hope that this helps you to feel comfortable answering each question honestly. Place a check mark in the box showing the number of times each experience has happened to you over the past 12 months. If several experiences occurred on the same occasion--for example, if one night someone told you some lies and had sex with you when you were drunk, you would check both boxes a and c. The past 12 months refers to the past year going back from today.

[Response scale: 0 times in the past 12 months—1 time in the past 12 months—2 times in the past 12 months—3+ times in the past 12 months]

1. Someone stared at me in a sexual way or looked at the sexual parts of my body after I had asked them to stop.
2. Someone made teasing comments of a sexual nature about my body or appearance after I asked them to stop.
3. Someone sent me sexual or obscene materials such as pictures, jokes, or stories in the mail or over the Internet, after I had asked them to stop. -- Do not include mass mailings or spam.
4. Someone showed me pornographic pictures when I had not agreed to look at them.
5. Someone made sexual or obscene phone calls to me when I had not agreed to talk with them.
6. Someone watched me while I was undressing, was nude, or was having sex, without my consent.
7. Someone took photos or videotapes of me when I was undressing, was nude, or was having sex, without my consent.
8. Someone showed me the private areas of their body (ex. butt, penis, or breasts) without my consent.
9. Someone made sexual motions to me, such as grabbing their crotch, pretending to masturbate, or imitating oral sex without my consent.
10. Someone masturbated in front of me without my consent.

The next set of questions refers to different sexual experiences that you might have had. Each question appears in bold type. After each question you will see statements labeled a through m. For each statement you are asked to indicate how many times that has occurred during the past 12 months.

[Response scale: 0 times in the past 12 months—1 time in the past 12 months—2 times in the past 12 months—3+ times in the past 12 months]

11. Someone fondled, kissed, or rubbed up against the private areas of my body (lips, breast/chest, crotch or butt) or removed some of my clothes without my consent (*but did not attempt sexual penetration*) by:
 - a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
 - b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
 - c. Giving me a drug such as Rohypnol, GHB, "fry cigarettes", "ecstasy" or "Ketamine" without my knowledge that made me too incapacitated (out of it) to consent or stop what was happening.
 - d. Using me when I was asleep or unconscious from drugs and when I came to (regained consciousness) I could not stop what was happening.
 - e. Encouraging and pressuring me to use drugs such as pot, or Valium until I became too incapacitated (out of it) to consent or stop what was happening.
 - f. Using me sexually after I had taken drugs and was conscious but too incapacitated (out of it) to give consent or stop what was happening.
 - g. Serving me high alcohol content drinks when they appeared to be regular strength drinks until I was too intoxicated (drunk) to give consent or stop what was happening.
 - h. Using me sexually when I was asleep or unconscious from alcohol, and when I came to (regained consciousness) I could not give consent or stop what was happening.
 - i. Encouraging or pressuring me to drink alcohol until I was too intoxicated (drunk) to give consent or stop what was happening.
 - j. Using me sexually after I had been drinking alcohol and was conscious but too intoxicated (drunk) to give consent or stop what was happening.
 - k. Threatening to physically harm me or someone close to me.
 - l. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
 - m. Acting together with two or more people to do these things to me even though I objected or was unable to give consent or stop what was happening.

12. Someone had oral sex with me or made me have oral sex with them without my consent by:
 - a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
 - b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
 - c. Giving me a drug such as Rohypnol, GHB, "fry cigarettes", "ecstasy" or "Ketamine" without my knowledge that made me too incapacitated (out of it) to consent or stop what was happening.
 - d. Using me when I was asleep or unconscious from drugs and when I came to (regained consciousness) I could not stop what was happening.

- e. Encouraging and pressuring me to use drugs such as pot, or Valium until I became too incapacitated (out of it) to consent or stop what was happening.
 - f. Using me sexually after I had taken drugs and was conscious but too incapacitated (out of it) to give consent or stop what was happening.
 - g. Serving me high alcohol content drinks when they appeared to be regular strength drinks until I was too intoxicated (drunk) to give consent or stop what was happening.
 - h. Using me sexually when I was asleep or unconscious from alcohol, and when I came to (regained consciousness) I could not give consent or stop what was happening.
 - i. Encouraging or pressuring me to drink alcohol until I was too intoxicated (drunk) to give consent or stop what was happening.
 - j. Using me sexually after I had been drinking alcohol and was conscious but too intoxicated (drunk) to give consent or stop what was happening.
 - k. Threatening to physically harm me or someone close to me.
 - l. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
 - m. Acting together with two or more people to do these things to me even though I objected or was unable to give consent or stop what was happening.
13. A man put his penis into my vagina, or someone inserted fingers or objects without my consent by *(If you are a male, check box and skip to item 14)*:
- a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
 - b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
 - c. Giving me a drug such as Rohypnol, GHB, "fry cigarettes", "ecstasy" or "Ketamine" without my knowledge that made me too incapacitated (out of it) to consent or stop what was happening.
 - d. Sexually using me when I was asleep or unconscious from drugs and when I came to (regained consciousness) I could not stop what was happening.
 - e. Encouraging and pressuring me to use drugs such as pot, or Valium until I became too incapacitated (out of it) to consent or stop what was happening.
 - f. Sexually using me after I had taken drugs and was conscious but too incapacitated (out of it) to give consent or stop what was happening.
 - g. Serving me high alcohol content drinks when they appeared to be regular strength drinks until I was too intoxicated (drunk) to give consent or stop what was happening.
 - h. Using me sexually when I was asleep or unconscious from alcohol, and when I came to (regained consciousness) I could not give consent or stop what was happening.
 - i. Encouraging or pressuring me to drink alcohol until I was too intoxicated (drunk) to give consent or stop what was happening.
 - j. Using me sexually after I had been drinking alcohol and was conscious but too intoxicated (drunk) to give consent or stop what was happening.

- k. Threatening to physically harm me or someone close to me.
 - l. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
 - m. Acting together with two or more people to do these things to me even though I objected or was unable to give consent or stop what was happening.
14. A man put his penis into my butt, or someone inserted fingers or objects without my consent by:
- a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
 - b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
 - c. Giving me a drug such as Rohypnol, GHB, "fry cigarettes", "ecstasy" or "Ketamine" without my knowledge that made me too incapacitated (out of it) to consent or stop what was happening.
 - d. Sexually using me when I was asleep or unconscious from drugs and when I came to (regained consciousness) I could not stop what was happening.
 - e. Encouraging and pressuring me to use drugs such as pot, or Valium until I became too incapacitated (out of it) to consent or stop what was happening.
 - f. Sexually using after I had taken drugs and was conscious but too incapacitated (out of it) to give consent or stop what was happening.
 - g. Serving me high alcohol content drinks when they appeared to be regular strength drinks until I was too intoxicated (drunk) to give consent or stop what was happening.
 - h. Using me sexually when I was asleep or unconscious from alcohol, and when I came to (regained consciousness) I could not give consent or stop what was happening.
 - i. Encouraging or pressuring me to drink alcohol until I was too intoxicated (drunk) to give consent or stop what was happening.
 - j. Using me sexually after I had been drinking alcohol and was conscious but too intoxicated (drunk) to give consent or stop what was happening.
 - k. Threatening to physically harm me or someone close to me.
 - l. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
 - m. Acting together with two or more people to do these things to me even though I objected or was unable to give consent or stop what was happening.
15. Even though it didn't happen, someone TRIED to have oral sex with me, or make me have oral sex with them without my consent by:
- a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
 - b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.

- c. Giving me a drug such as Rohypnol, GHB, "fry cigarettes", "ecstasy" or "Ketamine" without my knowledge that made me too incapacitated (out of it) to consent or stop what was happening.
 - d. Sexually using me when I was asleep or unconscious from drugs and when I came to (regained consciousness) I could not stop what was happening.
 - e. Encouraging and pressuring me to use drugs such as pot, or Valium until I became too incapacitated (out of it) to consent or stop what was happening.
 - f. Sexually using me after I had taken drugs and was conscious but too incapacitated (out of it) to give consent or stop what was happening.
 - g. Serving me high alcohol content drinks when they appeared to be regular strength drinks until I was too intoxicated (drunk) to give consent or stop what was happening.
 - h. Using me sexually when I was asleep or unconscious from alcohol, and when I came to (regained consciousness) I could not give consent or stop what was happening.
 - i. Encouraging or pressuring me to drink alcohol until I was too intoxicated (drunk) to give consent or stop what was happening.
 - j. Using me sexually after I had been drinking alcohol and was conscious but too intoxicated (drunk) to give consent or stop what was happening.
 - k. Threatening to physically harm me or someone close to me.
 - l. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
 - m. Acting together with two or more people to do these things to me even though I objected or was unable to give consent or stop what was happening.
16. Someone TRIED to put fingers, objects (such as a bottle or a candle) or their penis into my vagina but stopped before genital contact after:
- a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
 - b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
 - c. Giving me a drug such as Rohypnol, GHB, "fry cigarettes", "ecstasy" or "Ketamine" without my knowledge that made me too incapacitated (out of it) to consent or stop what was happening.
 - d. Sexually using me when I was asleep or unconscious from drugs and when I came to (regained consciousness) I could not stop what was happening.
 - e. Encouraging and pressuring me to use drugs such as pot, or Valium until I became too incapacitated (out of it) to consent or stop what was happening.
 - f. Sexually using me after I had taken drugs and was conscious but too incapacitated (out of it) to give consent or stop what was happening.
 - g. Serving me high alcohol content drinks when they appeared to be regular strength drinks until I was too intoxicated (drunk) to give consent or stop what was happening.

- h. Using me sexually when I was asleep or unconscious from alcohol, and when I came to (regained consciousness) I could not give consent or stop what was happening.
 - i. Encouraging or pressuring me to drink alcohol until I was too intoxicated (drunk) to give consent or stop what was happening.
 - j. Using me sexually after I had been drinking alcohol and was conscious but too intoxicated (drunk) to give consent or stop what was happening.
 - k. Threatening to physically harm me or someone close to me.
 - l. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
 - m. Acting together with two or more people to do these things to me even though I objected or was unable to give consent or stop what was happening.
17. Even though it didn't happen, a man TRIED to put his penis into my butt, or someone tried to stick in objects or fingers without my consent by:
- a. Telling lies, threatening to end the relationship, threatening to spread rumors about me, making promises I knew were untrue, or continually verbally pressuring me after I said I didn't want to.
 - b. Showing displeasure, criticizing my sexuality or attractiveness, getting angry but not using physical force, after I said I didn't want to.
 - c. Giving me a drug such as Rohypnol, GHB, "fry cigarettes", "ecstasy" or "Ketamine" without my knowledge that made me too incapacitated (out of it) to consent or stop what was happening.
 - d. Sexually using me when I was asleep or unconscious from drugs and when I came to (regained consciousness) I could not stop what was happening.
 - e. Encouraging and pressuring me to use drugs such as pot, or Valium until I became too incapacitated (out of it) to consent or stop what was happening.
 - f. Sexually using me sexually after I had taken drugs and was conscious but too incapacitated (out of it) to give consent or stop what was happening.
 - g. Serving me high alcohol content drinks when they appeared to be regular strength drinks until I was too intoxicated (drunk) to give consent or stop what was happening.
 - h. Using me sexually when I was asleep or unconscious from alcohol, and when I came to (regained consciousness) I could not give consent or stop what was happening.
 - i. Encouraging or pressuring me to drink alcohol until I was too intoxicated (drunk) to give consent or stop what was happening.
 - j. Using me sexually after I had been drinking alcohol and was conscious but too intoxicated (drunk) to give consent or stop what was happening.
 - k. Threatening to physically harm me or someone close to me.
 - l. Using force, for example holding me down with their body weight, pinning my arms, or having a weapon.
 - m. Acting together with two or more people to do these things to me even though I objected or was unable to give consent or stop what was happening.

If you reported one or more experiences described in items 13 or 14 please answer the next question.

18. I woke up several hours later with a sore vagina or anus, and had little or no memory of what had happened.
19. Did any of the experiences described in this survey happen to you 1 or more times?
 - a. Yes
 - b. No
20. What was the sex of the person or persons who did them to you?
 - a. Female only
 - b. Male only
 - c. Both females and males
 - d. I reported no experiences
21. Have you ever been raped?
 - a. Yes
 - b. No

APPENDIX J

MODIFIED YOUNG ADULTS ALCOHOL PROBLEM SCREENING TEST
(YAAPST)

[Response scale: Never—Yes, but not in the past year—1 time in the past year—2 times in the past year—3 times or more in the past year]

1. Has drinking ever gotten you into sexual situations you later regretted?
2. Because you had been drinking, have you ever neglected to use birth control or neglected to protect yourself from sexually transmitted diseases?
3. Because you had been drinking, have you ever had sex when you really didn't want to?
4. Because you had been drinking, have you ever had sex with someone you wouldn't ordinarily have sex with?

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