Effect of Gender Priming on Attitudes towards Substance Use

Kathryn Sampson
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Abstract
[From the introduction]

It has been estimated that about 50% of deaths in the United States could be prevented by a change in personal health practices (Courtenay, 1998). For instance, among 15- to 24-year olds, 80% of all deaths occur from fatal injuries. On average, males have higher death rates than females for ten of the leading causes of death, and females have a greater life expectancy than males by seven years (Courtenay, McCreary, & Merighi, 2002; Verbrugge, 1985). One theory on why women live longer is due to their health behaviors. Women tend to engage in more health-promoting and preventative behaviors than men, and men are more likely to engage in risk-taking behaviors than women (Courtenay, 1998; Courtenay et al., 2002). Some examples of risk-taking behaviors, which can be established during youth, include: tobacco use, dietary behaviors and lack of physical activity, sexual behaviors, engagement in violence, and alcohol and other drug use, as well as many others (Ghanbari-Panah, Shariff, Tajalli, & Ashtiani, 2011).

It has been reported that males in college are more likely than females in college to drive under the influence of alcohol, frequently binge drink, carry weapons, fight, and use drugs (Courtenay, 1998). The increased health risk behaviors seen in men and more health promoting behaviors seen by women could be a result of gender roles and socialization. People who talk about, seek help, and care for injuries and illness are associated with the feminine gender role and risk-taking (i.e., alcohol and substance use) is seen as a way to demonstrate the masculine gender role (Peralta, 2007; Verbrugge, 1985).

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Effect of Gender Priming on Attitudes towards Substance Use

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Department of Psychology
The Effect of Priming Gender on Attitudes towards Substance Use

It has been estimated that about 50% of deaths in the United States could be prevented by a change in personal health practices (Courtenay, 1998). For instance, among 15- to 24-year olds, 80% of all deaths occur from fatal injuries. On average, males have higher death rates than females for ten of the leading causes of death, and females have a greater life expectancy than males by seven years (Courtenay, McCreary, & Merighi, 2002; Verbrugge, 1985). One theory on why women live longer is due to their health behaviors. Women tend to engage in more health-promoting and preventative behaviors than men, and men are more likely to engage in risk-taking behaviors than women (Courtenay, 1998; Courtenay et al., 2002). Some examples of risk-taking behaviors, which can be established during youth, include: tobacco use, dietary behaviors and lack of physical activity, sexual behaviors, engagement in violence, and alcohol and other drug use, as well as many others (Ghanbari-Panah, Shariff, Tajalli, & Ashtiani, 2011).

It has been reported that males in college are more likely than females in college to drive under the influence of alcohol, frequently binge drink, carry weapons, fight, and use drugs (Courtenay, 1998). The increased health risk behaviors seen in men and more health promoting behaviors seen by women could be a result of gender roles and socialization. People who talk about, seek help, and care for injuries and illness are associated with the feminine gender role and risk-taking (i.e., alcohol and substance use) is seen as a way to demonstrate the masculine gender role (Peralta, 2007; Verbrugge, 1985).

Substance Use among College Students

Drug use is viewed as one of the top high-risk health behaviors common among college students (Courtenay, 1998). The trend for males to put their health at risk more than females is evident with the higher prevalence of substance use seen amongst males. Results consistently
report that males are more likely than females to engage in almost every high-risk health behavior, including alcohol and other drug use (Courtenay, 1998; Mahalik, Burns, & Syzdek, 2007; Patrick et al., 1997). Data from a national survey on alcohol and drug use of college students at two and four-year institutions, indicate that from 2009 to 2011, 81.80% of students have consumed alcohol in the past year, 62.30% of underage students had consumed alcohol in the past 30 days and 43.90% of students had reported binge drinking, which is defined as the consumption of five or more alcoholic drinks in one sitting (Southern Illinois University Carbondale, 2013).

In a study of California college students by Patrick et al. (1997), results indicated that in the past 30 days men were more likely than women to consume at least one alcoholic drink (72.20% and 67.50%, respectively). Of the students who had reported binge drinking, men were more likely than women to engage in this behavior (43.90% and 30.70%, respectively; Patrick et al., 1997). Marijuana was reported as the most commonly used illegal substance in the past 30 days, with 17.90% prevalence (Southern Illinois University Carbondale, 2013), and was used more frequently by males than females (20.30% and 15.30%, respectively; Patrick, et al., 1997). Reports indicate that 5.90% of respondents had used illegal drugs other than marijuana in the past 30 days (Southern Illinois University Carbondale, 2013). Other drugs (i.e., LSD, PCP, ecstasy, speed, and heroin) were also more commonly used by males than females (28.90% and 21.80%, respectively), and cocaine was used by twice as many males than females (Patrick, et al., 1997). Results also indicate that males are more likely to report smoking than females (21.90% and 18.90%, respectively).

Furthermore, not only do males use drugs and consume alcohol more often than females, but there is also a higher prevalence of substance abuse and dependence for this group
(Courtenay et al., 2002). Results indicate that of people who report the use of alcohol and other substances, males are more likely than females to engage in these high-risk behaviors. However, these health behaviors are influenced by gender roles and stereotypes.

**Gender-Related Influences on Health Behaviors and Substance Use**

Through socialization gender roles and schemas have been created that focus on the behavioral aspects of what it means to be a man and what it means to be a woman, which influences one’s health related behaviors (West & Zimmerman, 1987). Individuals create patterns related to gender roles; however, these schemas are not always well-defined (Plante, 2006). Individuals can engage in masculine and feminine behaviors that can be influenced by one’s social settings in order to achieve the desired gender role of the social situation (de Visser & McDonnell, 2013). In other words, gender can be viewed as a feature of social situations rather than a property of the individual (West & Zimmerman, 1987).

Previous research has shown that gender roles influence health promoting and health risk behaviors (Verbrugge, 1985). Endorsing more feminine gender role characteristics has been found to be a deterrent for many risk behaviors among college students, such as academic dishonesty or drug use (Peralta et al., 2010). Previous research shows that the characteristics of the feminine gender role are negatively associated with binge drinking. This may be due to the way heavy drinking is viewed among those who endorse the feminine gender role. It is not widely accepted socially for more feminine individuals to engage in binge-drinking practices. Moreover, abstaining from alcohol or engaging in light alcohol use, whether male or female, has been associated with a weakness and femininity, and females who engage in heavy alcohol use are viewed as bad, promiscuous, or masculine and (Huselid & Cooper, 1992; Peralta, 2007). In addition, due to gender roles, individuals are perceived as more masculine and manly when they
GENDER PRIMING AND ATTITUDES ON SUBSTANCE USE

engage in health risk behaviors. Alcohol use, especially heavy use, among males or females is associated with power and dominance, which are characteristics of the masculine gender role (Peralta, 2007). It has been shown that the masculine gender role is predictive of binge drinking amongst males and females (Peralta et al., 2010). Heavy drinking is a type of risk taking that is accepted and expected in men in order to demonstrate their masculinity (Peralta, 2007). Furthermore, this type of behavior is linked with being “macho” and 68.00% of men and 73.00% of women endorse this belief (Peralta, 2007). The evidence supports the fact that strictly being male is an indicator of increased health risk behaviors and being female is an indicator of increased health promoting behaviors, but gender roles and norms also play an important role in one’s behaviors. Individuals who adopt stereotypic masculine norms put themselves at greater health risks than individuals who do not adopt these gender norms, whereas individuals that adopt feminine norms are less likely to engage in health risk behaviors and more likely to seek help (Huselid & Cooper, 1992; Verbrugge, 1985).

Priming Gender and Effects on Attitudes and Behaviors

A person’s attitude can be activated without conscious awareness or intention. Stereotyping is a cognitive process consisting of automatic and controlled components (Banaji & Hardin, 1996). Stereotypes are formed by information that is processed with previous experiences and stored as mental representations in one’s memory (Brechue, 2009). Automatic stereotyping involves awareness of the influence on judgment, but the perceiver is unable to control the response. Influences on stereotypes can come from the presence of physical features associated with the stereotyped group. In other words, stereotypes are influenced by contextual factors that people are unaware of (Bargh, 2007). Stereotypes can be made salient in a number of ways, one of which is priming. When researchers refer to priming participants, they are
incidentally activating knowledge structures, like stereotypes and trait concepts, which can carry over for some time to influence behaviors (Bargh, Chen, & Burrows, 1996). Priming uses stimuli (i.e., trait or category concepts or environmental or material objects) to activate concepts which then initiates and guides one’s responses (Brechue, 2009). Previous research has shown that priming stereotypes can influence social perception without awareness from the individual being primed.

Prior research on priming has been observed in a range of categories in social psychology (e.g., stereotypes and normative behavior; Brechue, 2009). Bargh et al. (1996) primed participants with rude, polite, or neutral concepts through a priming task involving a Scrambled Sentence Test. In the priming task participants used a list of five words to construct a grammatically correct four word sentence. Results indicate that participants in the rude priming condition interrupted a conversation significantly faster and more often than participants in the neutral and polite conditions. In another study, participants were primed with the same task for an elderly or neutral concept. Results indicated that participants primed with the elderly condition walked more slowly down a hall which followed the common stereotype that the elderly walk slower (Bargh et al., 1996). Results from these studies indicate that participants’ behaviors reflect those of a stereotyped group that participants were primed with. As evident from prior research, behaviors can be non-consciously influenced through words linked to particular stereotypes.

A couple studies unique to priming research evaluate attitudes rather than behaviors. Steele and Ambady (2006) studied the effects of gender priming in an academic domain. In this study, subliminal priming task was used to present the concept of male or female to each participant. After the task, participants were asked about their attitudes on math and art.
According to common stereotypes, women are supposed to find art pleasant and math unpleasant. Results indicated that women primed with the female concept had stereotype-consistent attitudes, and females primed with the male concept did not differ in attitudes. Results suggested primes that follow stereotype consistent attitudes (i.e., female primed with female concept) had a stronger, more pronounced effect than primes with stereotype-inconsistent attitudes (i.e., females primed with male concept).

In another study on the effects of gender priming on health related behaviors, results indicate that males primed with stereotype-inconsistent attitudes (i.e., males primed with feminine) reported less health related behaviors than males primed with stereotype-consistent attitudes (i.e., males primed with masculine), which is inconsistent with previous research (Penttila, Salgado, & Middleton, 2013). Results from this study indicate men primed with feminine reported even more negative health related behaviors. As evident from prior research, the use of primes can be used to activate knowledge structures without conscious awareness from the individual, and they elicit trait concepts and stereotypes that can influence behaviors and attitudes. Similarly, individual’s behaviors and attitudes can be influenced to fit appropriate gender roles and stereotypes for a particular social situation based on contextual factors that elicit trait concepts and stereotypes appropriate to the situation (West & Zimmerman, 1987).

Individuals’ behaviors and attitudes have been primed with a variety of methods to activate stereotypes and trait concepts. Gender roles have been primed with pictures of males and females associated with a description of a typical or atypical occupation for that gender (Rudman & Phelan, 2010). Researchers have primed social groups related to helping with a letter-detection task. In this task participants had to answer as quickly as possible whether or not a string of similar letters had a capital letter. Before each string of letters was presented, a prime word was
presented for 23 milliseconds (Aarts et al., 2005). Bargh et al. (1996) primed participants with a scrambled sentence task in which participants had to construct a sentence with a given set of words. Gender stereotypes have been primed with an anagram task (Penttila, Salgado, & Middleton, 2013). Anagrams are part of the problem-solving family and are similar to word-fragment completion tasks. They have a perceptual component involved in the reordering of the words, and the repetition priming of anagrams presents a conceptual component that makes the stereotype or trait concept more salient (Graf & Masson, 1993). The important aspect of all of the methods used to prime participants is that it makes salient to the participant, without conscious awareness, the category that is being primed.

Gender stereotypes associate males and females with traits, abilities, and roles that follow typical gender roles. Gender roles and stereotypes are often learned early in life and can affect perceptions of others without the conscious awareness of this judgment (Rudman & Phelan, 2010). Based on the previous research, gender roles are salient to the social situation (West & Zimmerman, 1987). It has been shown that the male gender role is a risk factor for alcohol and substance use while the female gender role is implicated in more health promoting behaviors. Individuals who adopt stereotypic masculine gender roles are at a higher risk of engaging in alcohol and substance use than individuals who adopt stereotypic feminine gender roles (Verbrugge, 1985). The current research uses anagrams to prime participants with gender role stereotypes (i.e., masculine, feminine, or neutral) in order to evaluate attitudes towards substance and alcohol use. According to previous research, participants primed with a gender-consistent prime (i.e., male primed with masculine) are more likely follow common stereotypes than participants primed with a gender-inconsistent prime (i.e., female primed with masculine; Steele & Ambady, 2006). Consistent with previous research indicating males engage in riskier
behaviors and use alcohol and other substances more than females, it is expected that males will report more substance use than females in the neutral prime, but there will be differential reports of substance use as a result of priming condition.

**Methods**

**Participants**

A total of 180 participants between the ages of 18-23 ($M = 19.71$, $SD = 1.42$) participated in this study. As shown in Table 1, most participants were White (55.56%), male (50.56%), heterosexual (94.41%), freshman (33.89%) or sophomores (26.11%), and from the middle socioeconomic status (SES; 79.45%).

**Materials**

**Demographic and background information.** Demographic information includes participant age, gender, class standing, race/ethnicity, sexual orientation, and socioeconomic status.

**Gender priming stimulus materials.** Stimulus materials include gender stereotype primes presented in the form of anagrams (i.e., word scrambles) to be solved by participants prior to continuing the questionnaire. The first two conditions (masculine and feminine) have an equal number of positive, negative, and neutral words associated with gender. Example words in the masculine condition included: suit, tough, and boy. Example words in the feminine condition included: dress, kind, and girl. The gender-neutral words in condition three included: pens, class, and book.

**Substance use.** Tobacco, recreational drug, and alcohol use were assessed using three items from the substance use subscale of the Health Belief Inventory-20 (HBI-20; Courtenay, McCreary, & Merighi, 2002; Levant, Wimer, & Williams, 2011). Items include “I use tobacco
products”, “I drink more than 2 alcoholic drinks a day”, and “I use recreational drugs” and are scored on a 7-point Likert scale (1=never to 7=always). All items were split by those who never use tobacco, recreational drugs, and alcohol and those who do use these substances. Heavy drinking was assessed using one item from the Domain Specific Risk Taking (DOSPERT) Scale (Blais & Weber, 2006). The item is, “Drinking heavily at a social function”, which assesses one’s likelihood to engage in heavy drinking. This item was scored on a 7-point Likert scale (1=extremely unlikely to 7=extremely likely). Items were split with those who were unlikely to drink heavily at social functions, including those that were not sure about their drinking habits, and those that were likely to drink heavily.

**Procedure**

Participants over the age of 18 were recruited through course presentations, instructors, student lists and social networking sites to participate in an online study on the effects of gender stereotypes on health-related attitudes and behaviors. The study was estimated to take approximately 20 minutes. Before beginning the questionnaire, participants were given a tacit informed consent form, stating they may withdraw at anytime without consequence. Participants had to read through and agree to the description of the participation duties before being randomly assigned to one of three priming conditions (i.e., feminine, masculine, or neutral). Once completed with the priming task, participants answered questions on their substance use. After completion, those who were interested in being entered into the raffle were directed to a separate, unlinked survey where they were asked to provide contact information to be entered in a raffle for one of three $25 gift cards. After completion, participants were debriefed and thanked for their participation.

**Results**
Pearson Chi Square Test for Independence were conducted to examine whether gender and priming condition had an influence on expected and observed frequencies on reports of participants’ use of tobacco, recreational drugs, and alcohol (see Table 2). There were a limited number of participants reporting substance use resulting in a skewed distribution of data. Results indicate that of participants that reported use, males reported a higher prevalence than females for tobacco (41.76% and 17.98%, respectively), recreational drugs (41.76% and 15.53%, respectively), alcohol (42.86% and 26.97%, respectively), and heavy alcohol use (48.40% and 38.20%, respectively).

There were no significant results by priming condition for males or females for tobacco use. Approximately 30.00% of participants reported using tobacco products. Tobacco use did not vary by priming condition for males, $\chi^2 (2, n = 91) = .32, p = .85$, or females, $\chi^2 (2, n = 89) = .13, p = .94$. There was no significant difference in priming condition for males or females for recreational drug use. There were approximately 28.89% of participants that reported recreational drug use. Recreational drug use did not vary significantly by priming condition for males, $\chi^2 (2, n = 91) = .1.31, p = .52$ or females, $\chi^2 (2, n = 89) = .80, p = .67$.

Results indicate a significant difference in priming condition for males, but there was not a significant difference in priming condition for females. Approximately 35.00% percent of participants reported drinking more than two alcoholic drinks a day. As shown in Figure 1, results varied significantly by priming condition for males, $\chi^2 (2, n = 91) = 6.55, p = .04$. Males in the feminine prime condition reported increased alcohol use compared to males in the neutral and masculine conditions. Results did not vary by priming condition for females, $\chi^2 (2, n = 89) = .35, p = .84$. 
For heavy alcohol use, there were no significant results for priming condition for males. There was a marginally significant difference in priming condition for females. Approximately 43.30% of participants reported that they were likely to drink heavily at a social function. Heavy alcohol use did not vary by priming condition for males, $\chi^2 (2, n = 91) = .05, p = .98$. As shown in Figure 2, there was a difference between priming condition for females, $\chi^2 (2, n = 89) = 5.53, p = .06$. Females in the feminine prime condition reported more heavy alcohol use than females in the neutral and masculine conditions.

**Discussion**

The results of this study indicate that males report more tobacco, recreational drug, and alcohol use than females. There was no significant difference between priming conditions on tobacco and recreational drug use for males or females; however, results were significant for males who reported drinking more than two alcoholic drinks a day, and there was a marginally significant effect for females who reported being likely to drink heavily at social functions. Results indicate a significant increase in reports of men’s alcohol use in the feminine prime condition and a trend for increased reports of women’s heavy alcohol use at social functions in the feminine prime condition.

The results are inconsistent with prior research reporting that alcohol consumption is more associated with the masculine gender role than the feminine gender role. It is more socially acceptable for males than females to drink because it follows stereotypical masculine gender roles, whereas heavy drinking is discouraged amongst females due to stereotypical feminine gender roles (Huselid & Cooper, 1992; Peralta, 2007; Peralta et al., 2010; Verbrugge, 1985). Mahalik et al. (2007) suggests that men who feel their masculinity is being threatened may respond in ways to assert their masculinity (i.e., consume more alcohol). Results of the current
study indicate that males primed with the feminine stereotype reported more alcohol use than males primed with the neutral or masculine stereotypes. Males in this condition may have felt their conception of masculinity being threatened and reported more alcohol use in order to regain their masculinity.

Females primed with the feminine stereotype reported being most likely to drink heavily at social functions compared females in the masculine and neutral conditions. Results were inconsistent with prior literature stating that the feminine gender role is implicated in health promoting behaviors and is associated with abstaining from alcohol use (Huselid & Cooper, 1992; Peralta, 2007; Peralta et al., 2010; Verbrugge, 1985). One suggestion for this inconsistency is that women who engage in heavy drinking may be responding to sexism and double standards by rejecting gender stereotypes (Huselid & Cooper, 1992; Peralta et al., 2010). Females in the feminine priming condition may have been asserting status or power by rejecting feminine expectations and engaging in alcohol use associated with the masculine gender role.

Tobacco and recreational drug use did not vary significantly by prime for males or females. Prior research states that the masculine gender role is associated with health risk behaviors, like increased substance use, and the feminine gender role is a deterrent for these health risk behaviors (Huselid & Cooper, 1992; Peralta, 2007; Peralta et al., 2010; Verbrugge, 1985). However, the difference in prevalence between gender for tobacco and recreational drug use is smaller than the difference in use between genders for alcohol (Patrick et al, 1997; Grunberg, Winders, & Wewers, 1991). The endorsement of gender role characteristics may not be as influential in tobacco and recreational drug use as it is for alcohol use.

Another possible explanation why there was no variation between the primes for males or females is that there were a limited number of participants who reported engaging in these
substances. Tobacco and recreational drug use are among the top high risk health behaviors among college students, but they are not as prevalent as alcohol (Courtenay, 1998; Ghanbari-Panah et al., 2011; Mahalik et al., 2007; Patrick et al., 1997; Southern Illinois University Carbondale, 2013). Alcohol facilitates gender expression in certain social situations. Alcohol use is a way to demonstrate power and dominance, and it is a form of risk taking that is accepted and expected amongst college students (Peralta, 2007). However, tobacco use is positively related to antisocial tendencies and social deviance (Grunberg et al., 1991). Tobacco and recreational drugs are not as socially accepted and expected amongst college students as alcohol is. The difference in the social perception of the different substances could explain why there was a significant difference between priming conditions for alcohol use but not tobacco or recreational drug use.

There are a few limitations to this study. First, the items used to assess tobacco, recreational drug, and alcohol use were items for specific assessments of behaviors (e.g, I drink more than 2 alcoholic drinks a day) rather than well-validated scales measuring the aspects of substance use. This research used items rather than well-validated measures, like the Alcohol and Drug Survey by the Core Institute, which assesses college students’ usage, attitudes, and perceptions of substances (Southern Illinois University Carbondale, 2013). Another limitation is that the data was skewed. A large portion of participants did not engage in substance use, especially for tobacco and recreational drugs. Also, the majority of participants were White, middle class, and heterosexual raising concern about whether the results would be replicable to participants with other racial backgrounds and sexual orientations.

Future research should address these limitations by assessing general attitudes towards substance use rather than using specific behavioral items. In addition, research should use a more diverse population in order for the results to be generalized. Finally, future research could also
examine gender priming, an individual’s conceptualization of a particular gender role, as well as how closely one identifies with that conceptualization of the gender role in relation to attitudes towards substance use (Mahalik et al., 2007).

The results of this study can be implicated in substance treatment programs. Individuals who endorse more masculine gender role characteristics respond to intervention programs differently than individuals who adopt more feminine gender role characteristics (Courtenay, 1998). More masculine individuals need more education and awareness about their substance use problem in order to consider change, whereas more feminine individuals need more assistance in identifying the causes and consequences of their substance use. Priming an individual with gender stereotypes could have implications in one’s response to treatment programs, as well as the type of treatment the individual needs.

In conclusion, results from this study suggest that priming condition is not related to reports of tobacco and recreational drug use, but there is a relationship between priming condition and alcohol use. Prior research has shown a social situation can make different schemas associated with gender roles salient (de Visser & McDonnell, 2013; Plante, 2006). When a stereotype or schema is activated it can influence one’s behaviors, social perceptions, and responses; moreover, social situations can influence one’s behaviors to achieve the desired gender role of the social setting (Bargh, 2007; Bargh, Chen, & Burrows, 1996; Brechue, 2009; de Visser & McDonnell, 2013; West & Zimmerman, 1987). When a social situation threatens a man’s masculinity or presents women with the opportunity to assert power, they may respond by behaving in a more stereotypical masculine manner.
References


Table 1.

*Participant Demographic Characteristics*

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>n</th>
<th>%</th>
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</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>91</td>
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</tr>
<tr>
<td>Female</td>
<td>89</td>
<td>49.44</td>
</tr>
<tr>
<td>Transgender</td>
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<td>0.00</td>
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<td></td>
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<tr>
<td>Freshman</td>
<td>61</td>
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<tr>
<td>Sophomore</td>
<td>47</td>
<td>26.11</td>
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<tr>
<td>Junior</td>
<td>39</td>
<td>21.67</td>
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<tr>
<td>Senior</td>
<td>28</td>
<td>15.56</td>
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<tr>
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<td>2.78</td>
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<td></td>
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<tr>
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<td>100</td>
<td>55.56</td>
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<td>0.56</td>
</tr>
<tr>
<td>Latino/Hispanic</td>
<td>19</td>
<td>10.56</td>
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<tr>
<td>Asian</td>
<td>27</td>
<td>15.00</td>
</tr>
<tr>
<td>Native Hawaiian/Other Pacific Islander</td>
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<td>2.22</td>
</tr>
<tr>
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<td>3.33</td>
</tr>
<tr>
<td>Biracial/Multiracial</td>
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<td>12.78</td>
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Family Socioeconomic Status
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<tr>
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<tbody>
<tr>
<td>Upper</td>
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<td>13.42</td>
</tr>
<tr>
<td>Middle</td>
<td>144</td>
<td>79.45</td>
</tr>
<tr>
<td>Lower</td>
<td>11</td>
<td>6.15</td>
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Sexual Orientation

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<thead>
<tr>
<th>Category</th>
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<th>Percentage</th>
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<tbody>
<tr>
<td>Heterosexual</td>
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<td>94.41</td>
</tr>
<tr>
<td>Bisexual</td>
<td>7</td>
<td>3.91</td>
</tr>
<tr>
<td>Other</td>
<td>3</td>
<td>1.68</td>
</tr>
</tbody>
</table>
Table 2.

*Percentage of participants that use or are likely to use substances by gender and priming condition*

<table>
<thead>
<tr>
<th>Priming Condition</th>
<th>Neutral</th>
<th>Feminine</th>
<th>Masculine</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>I use tobacco products</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>13</td>
<td>38.24</td>
<td>14</td>
<td>45.16</td>
</tr>
<tr>
<td>Females</td>
<td>5</td>
<td>16.67</td>
<td>5</td>
<td>17.24</td>
</tr>
<tr>
<td>I use recreational drugs</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>12</td>
<td>35.29</td>
<td>13</td>
<td>41.94</td>
</tr>
<tr>
<td>Females</td>
<td>4</td>
<td>13.33</td>
<td>6</td>
<td>20.69</td>
</tr>
<tr>
<td>I drink more than 2 alcoholic drinks a day</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>11</td>
<td>32.35</td>
<td>19</td>
<td>61.29</td>
</tr>
<tr>
<td>Females</td>
<td>7</td>
<td>23.33</td>
<td>8</td>
<td>27.59</td>
</tr>
<tr>
<td>Drinking heavily at a social function</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>16</td>
<td>47.10</td>
<td>15</td>
<td>48.40</td>
</tr>
<tr>
<td>Females</td>
<td>8</td>
<td>26.70</td>
<td>16</td>
<td>55.20</td>
</tr>
</tbody>
</table>
Figure 1. Alcohol use by gender and priming condition.
Figure 2. Heavy alcohol use by gender and priming condition.