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The Impact of Gender on Binge Drinking Behavior Among U.S. College Students Attending a Midwestern University: An Analysis of Two Gender Measures

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violent behaviors, both while under the influence and when sober (Felson, Teasdale, & Burchfield, 2008). The relationship between alcohol use and deviance is not limited to the adult population nor is drinking equally distributed among men and women. Beyond the illegality of juveniles using alcohol, research has clearly demonstrated a relationship between offending among youth, alcohol use, and gender (Bachman & Peralta, 2002; Newcomb & McGee, 1989; White, Hansell, & Brick, 1993; White, Tice, Loeber, & Stouthamer-Loeber, 2002). It is, therefore, important to continue examining patterns of

In interviews, users claimed that alcohol fueled courage and calmed nerves, thus acting as a facilitating factor for criminal acts.

While some comparisons have been made between "light" and "heavy drinkers," many studies focus on "binge drinking" generally defined as having four (for women) or five (for men) alcoholic drinks in a single drinking occasion (Wechsler, Dowdall, Davenport, & Rimm, 1995). Petrie, Doran, Shakesaft, and Sanson-Fisher (2010) found that binge drinking was significantly related to higher incidents of assault, disorderly conduct, and malicious damage. Furthermore, binge drinking may also increase the risk of criminal involvement by changing the assessments of such behaviors. In a quasi-experimental study, students who drank heavily at parties reported an increase in favorable attitudes toward criminal behaviors and a decrease in the perception of risk associated with such acts (Lanza- Kaduce, Bishop, & Winner, 1997).

These studies establish a clear relationship between alcohol and criminal involvement as offenders and victims. They also indicate that there are important sex differences in these experiences. In an attempt to explain such sex differences, several studies have turned to gender identity and in particular masculinity (see, for example, Messerschmidt, 1993, 1997, 1999, 2000) to examine the relationship between sex and offending. While many of these works focus on violence as an expression of masculine identity, other types of behavior are also linked to gender. For example, Nofziger (2010) found that feminine gender identity serves as a deterrent for a range of deviant behavior among college students, including drug use, academic dishonesty, and property crimes, while masculinity had no effect. Capraro (2000) and Gough and Edwards (1998) both specifi-

Velasco-Mondragon, Herrera-Vazquez, Burges, & Lazcano-Ponce, 2005) suggesting the importance of sex in decisions to use or not use alcohol. Amaro, Blake, Schwartz, and Flinchbaugh (2001) published a thorough review of the literature on gender and substance abuse and strongly recommended more research that addresses "the role that gender has as a major defining social factor in shaping risk" (p. 281). While past research has shown significant differences by sex, further research is needed to illuminate the nuanced impact of gender identity on the epidemiological distribution of drinking and, correspondingly, other forms of crime. Thus, we stand to gain from an in-depth understanding of the way in which binge drinking might be implicated in creating and or reinforcing normative gender frameworks and relationships.

The few existing studies using gender-specific measures suggest that while physical sex differences do not lead to much difference in the likelihood of hav

gender (e.g., physical violence, dieting, and weightlifting). Social expectations of masculinity in U.S. society include a number of behaviors that rely on the physical body (Kimmel, 1987). For example, professional athletes use their bodies in ways that symbolize masculine superiority in strength and power that ironically can cause substantial physical damage (Connell & Messerschmidt, 2005; Messner, 1989). Masculinity is also often associated with risk-taking behaviors that place the physical body at risk for harm and can subsequently result in a weakened body. One area of embodied risk behavior used to display masculinity is heavy alcohol use. Men have been found to use alcohol to demonstrate their stamina, self-control, nonconformity, and willingness to take risks, thereby embodying masculinity through risky drinking behaviors (Peralta, 2007). The pattern of demonstrating masculinity through substance use and risk taking has been observed among adolescents in the United States and other developed nations

characteristics that remains fairly stable across situations (Bem, 1974). Based on this perspective, the Bem Sex Role Inventory (BSRI) was developed to assess gender identity by measuring how strongly individuals self-identify with masculine and feminine characteristics perceived to be associated with men and women (i.e., sex). The goal of the BSRI is to assess gender characteristics (i.e., having self-described traits of masculinity and femininity that conform to a specific gender identity) and to discern whether gender identity is likely to influence actions on the basis of gender (Bem, 1993). If this is true, then it provides evidence that gender—at least in part—is associated with social and behavioral actions of individuals (Bem, 1993).
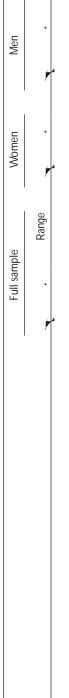
Another scale that has been developed to measure gendered identity among individuals is the Personal Attributes Questionnaire (PAQ). This scale measures gendered expressivity and instrumentality on a 5-point Likert-type scale (Spence, Helmreich, & Stapp, 1973). The two traits examined are "masculine" and "feminine" traits. Each trait has an "extreme" response that indicates a "total" identity for that trait (i.e., completely feminine, completely masculine). These two scales are similar in that they both attempt to measure gendered traits and have been used in studies to examine a range of outcomes, including religious preferences and attendance (Francis & Wilcox, 1998), spousal interactions (Miller, Caughlin, & Huston, 2003), and the construction of offenders and victims in media (Eschholz & Bufkin, 2001). However, the BSRI is dependent on the self-assessment of the individual while the PAQ is more dependent on the researcher to calculate gender role orientation totals for each respondent. While most studies use only one of these measures, the use of both scales has been recommended due to their similarity. Using both also provides an assessment of the internal validity of gender for participants (Choi, 2004).

Study Aims and Hypotheses

Influenced by Huselid and Cooper (1992), this study seeks to further the understanding of how the social process of gender and gender ideology in particular might influence contemporary alcohol use among college students at a Midwest university. We continue the argument that gender identity is a more important factor than biological sex in drinking behavior differences found between men and women. To expand upon research on the social processes of gender in relation to alcohol use practices (see Amaro et al., 2001), we examine how masculine and feminine traits can be used to understand how gendered ideologies might predict drinking behavior. Specifically, we explore whether identification with masculine traits is associated with binge drinking among college students. Unlike past research that has only focused on one measure of gender identity to predict drinking (Huselid & Cooper, 1992), we examine the

two measures, we are able to analyze the relationship between gender and alcohol use in a more comprehensive manner.

Using data from a study of college student substance use and abuse, we explore the relationship between an individual's orientation toward gender and binge drinking. According to the Substance Abuse and Mental Health Services Administration, and the Monitoring the Future survey, each indicate that drinking quantity and frequency rates peak between the ages of 18 and 25 years (O'Malley & Johnston, 2002). Whereas illicit drug use is higher among noncollege students, alcohol use/abuse is higher

Table 1. Descriptive Statistics for All Analysis Variables

	Full sample		Women		Men	
	Range					

Survey (Wechsler & Nelson, 2001). We also used the standard definition of binge drinking, commonly used by alcohol researchers, which is 4 or more drinks for women and 5 or more drinks for men in a single episode over the past 2 weeks (Wechsler et al., 2004; Wechsler & Wuethrich, 2002). This same measurement is used in numerous other national studies such as Monitoring the Future, National College Health Behavior Survey, and the National Household Survey of Drug Abuse. This 5- and 4-drink measure was first developed because previous research found that 5 drinks imbibed in a row for men and 4 for women has been associated with a significant increase in risk for alcohol-related problems (Wechsler & Nelson, 2001). The standard definition of a

match what others have done in the past (see Huselid & Cooper, 1992): (1) Instrumentality (masculinity, characterized by traits such as "self-confidence"; .60), and (2) expressivity (femininity, incorporates attributes such as "concern for others"; .78).

The masculine traits represent self-assertive and instrumental personality social characteristics while female traits represent interpersonal expressive traits (Spence et al., 1973). These items follow the same logic as the BSRI in assuming that individuals have both masculine and feminine traits but accounts for them in a different way. By having individuals rate themselves on a self-assessed gradient of different gender roles, researchers can locate the areas in which gendered identity is the strongest and how individuals identify with gender roles. One of the main criticisms leveled against the PAQ is that the BSRI is a generally more reliable measure of gender role orientations because the PAQ requires more effort to score and requires more data manipu-

BSRI masculinity scale (4.8). The same was true for the PAQ scale (3.17 vs. 2.76). The prevalence rate of binge drinking among our respondents was comparable to national levels. As much as 25% (105) and 21% (87) of the respondents engaged in occasional and frequent binge drinking, respectively. Another 54% (225) did not report binge drinking. Among men, 20% (31) were categorized as occasional binge drinkers, 33% (52) were classified as frequent binge drinkers, and 48% (75) reported no binge drinking and/or abstained from alcohol. Among women, 29% (74) were classified as occasional binge drinkers, 14 % (35) were frequent binge drinkers and 58% (148) did not binge drink and or abstained from alcohol. These results demonstrate that men were significantly more likely to experience binge drinking behavior, thus supporting Hypothesis 1 as well as previous research on sex differences in binge drinking where men are more likely to binge drink than women.

To establish the independent results of each measurement, we conducted separate multinomial regression models for both the PAQ and the BSRI (see Table 2 below).

Table 2. Multinomial Logistic Regression (ML): Occasional and Frequent Binge Drinking Regressed on Control Variables, the BSRI and the PAQ

	Model 1				Model 2				Model 3			
	Occasional		Frequent		Occasional		Frequent		Occasional		Frequent	
	B	OR	B	OR	B	OR	B	OR	B	OR	B	OR
Control variables												
Race (nonwhite 1)	0.61	0.54†	1.14	0.32*	0.53	0.59	1.32	0.27**	0.82	0.44*	1.35	0.26**
Male	0.14	0.87	1.04	2.82***	0.33	0.72	0.58	1.78	0.50	0.61	0.42	1.52
Live By/A… ROUBD2 (3R1hA1DB…B(0.50	0.R4											

Table 3.

Discussion

Our results indicate that, regardless of sex, a masculine gender identity is predictive of binge-level alcohol use; feminine gender identity derived from the PAQ predicts binge drinking in the negative direction while femininity as measured by the BSRI is not significantly associated with binge drinking. We conclude that gender identity plays a role in alcohol use behaviors: Students may be relying on alcohol use as a form of conspicuous gender expression. Males, who are socialized to be masculine, may rely on heavy alcohol use to coincide with other forms of male-associated behaviors (e.g. sport, risk-taking). Women, who are socialized to be feminine, on the other hand, may not engage in heavy drinking practices because this is not a part of normative femininity expression rituals and because heavy drinking is more likely to be socially admonished among women (Lo, 1995; Peralta, 2007).

In demonstrating that both masculine and feminine gender identity characteristics are active in reducing or promoting binge drinking behaviors, we perhaps generate more questions than answers in terms of how gendered identity influences binge drinking behaviors. Why, for example, is feminine gender identity not significantly associated with reduced binge drinking behaviors according to the BSRI, while expressivity (femininity) traits as measured by the PAQ do influence drinking? We speculate that differences in self-reporting on socially desirable characteristics may be evident in how participants respond to the BSRI versus the PAQ and or alcohol use survey questions. Another possibility that may account for the shifts in significance between masculinity and femininity may lie in what the scales were designed to measure. For instance, as we pointed out previously, the BSRI is a measure of gender identity while the PAQ was designed to capture instrumental and expressive traits. While both measures are concerned primarily with a gendered identity, the ways in which each measures this identity are different and could account for the differences that we have noted between the measures. Alternatively, perhaps these findings provide a call to revise and update the PAQ. Perhaps "expressivity" is not a particularly feminine trait among contemporary youth.

Given our findings, the inclusion of multiple measures of gender in future research may offer a more comprehensive estimation of how gender identities and gendered traits influence behavior. Indeed, previous research suggests that the alcohol-related crime nexus is also influenced by sociological tenets of gender (Messerschmidt, 1993). By finding significant shifts between masculinity and femininity, we have offered some support toward the claim that multiple measures of gender identity can capture effects on a given phenomena more effectively than a single measure can.

This study contributes to the literature on alcohol and gender in three important ways. Relatively little research has utilized either the BSRI or the PAQ in the study of binge drinking behavior among college students. This is in spite of the fact that each gender scale has been applied to college students as predictors of other forms of risk behavior. Aside from Huselid and Cooper's (1992) work, studies using the PAQ, for

instance, have mainly assessed how young adults with certain gendered characteristics engage in other health-risk behaviors (Shifren, Furnham, & Bauserman, 2003; Snell, Belk, & Hawkins, 1987). While such studies did involve some measure of drinking as a risk behavior, they did not focus on binge drinking specifically. Similarly, the BSRI has only been used in one study to examine different types of dependency, including alcohol dependency among college students (Bornstein, Bowers, & Bonner, 1996). This study applies two measures of gender identity to the problem of binge drinking among college students in order to further assess which individual gendered qualities might lead to binge drinking behaviors in a Midwest university setting.

A second contribution we make is by comparing these two measures of gender in their ability to predict binge drinking. While prior research found important interactions between sex and gender identity to predict drinking behaviors using the PAQ (Huselid & Cooper, 1992), our use of the BSRI as well as the PAQ allows us to capture the changing definitions of gender roles that are not always apparent in the PAQ. In particular, using duel assessments of gender allowed us to determine whether these two indicators of gender identity similarly correspond to particular forms of drinking behavior.

Finally, our merging of the PAQ and BSRI provide for a more holistic assessment of gender by drawing on the different dimensions of gender tapped by the PAQ and the BSRI. Establishing a significant relationship between such a comprehensive measure of gender and binge drinking can provide additional and perhaps more robust empirical support for the impact of gender on a risky form of substance abuse commonly associated with violence and victimization (i.e., alcohol use).

This study is not without limitations. First, the data analyzed here are not based on a representative sample; the data come from a convenience sample of students at a single medium-sized Midwestern university. Also, the sample is slightly skewed toward females, younger students (i.e., freshmen) and African Americans. Thus, generalization of our findings is quite limited. However, our main intent is to further theoretical consideration of the impact of gender (as opposed to sex) on alcohol use. Next, women may be underreporting alcohol use behavior in accordance to the double standard in drinking alluded to above. Additionally, the gender scales we utilized may be dated in that they were developed in the 1970s. Contemporary gender expression and gender-based rituals may have shifted rendering prominent gender measures (including the ones used in the present study) inadequate. However, it is important to reiterate that others have continued to use these scales and have reported results suggesting that these scales continue to be useful for measuring gender. Finally, we were not able to report a precise response rate due to the sampling strategy we adopted. Despite these limitations, using two gender measures and securing data from a contemporary Midwest sample of college students adds to the literature. While our sample is disproportionately young they are also largely unmarried and many are likely not yet parents. This may be important because we know that an important symbolic

users could benefit from alcohol education classes or restorative justice programs that are informed by gender-centered, evidence-based literature.

In conclusion, research on alcohol use needs to continue to move beyond basic demographic descriptions of drinking differences. Taking femininity and masculinity for granted has limited our ability to understand how and why alcohol is used or not used by male and females. A sociological analysis into the empirical question of whether gender versus sex matters for binge drinking moves us from simple descriptive statistics on sex differences into a more nuanced understanding of the gendered significance of alcohol use. From such a vantage point, we stand to gain a better understanding of the gendered causes or sources of problem drinking among women and men alike. Having a better understanding of binge drinking (particularly among this population—college students) is important, given college students' increased risk for binge drinking and binge drinking's corollaries that include crime and victimization.

Appendix A: BSRI (Bem Sex Role Inventory)

BSRI

Rate yourself on each item, on a scale from 0 ( ) to 7
( )

1. Self-reliant	21. Analytical	41. Solemn
2. Yielding	22. Sympathetic	42. Willing to take a stand
3. Helpful	23. Jealous	43. Tender
4. Defends own beliefs	24. Leadership ability	44. Friendly
5. Cheerful	25. Sensitive to other's needs	45. Aggressive
6. Moody	26. Truthful	46. Gullible
7. Independent	27. Willing to take risks	47. Inefficient
8. Shy	28. Understanding	48. Acts as a leader
9. Conscientious	29. Secretive	49. Childlike
10. Athletic	30. Makes decisions easily	50. Adaptable
11. Affectionate	31. Compassionate	51. Individualistic
12. Theatrical	32. Sincere	52. Does not use harsh language
13. Assertive	33. Self-sufficient	53. Unsystematic
14. Flatterable	34. Eager to soothe hurt feelings	54. Competitive
15. Happy	35. Conceited	55. Loves children
16. Strong personality	36. Dominant	56. Tactful

Appendix B: PAQ (Personal Attributes Questionnaire)

PAQ

The items below inquire about what kind of person that you think you are. Each item consists of a PAIR of characteristics, with the numbers 0 to 7 in between. Each pair describes contradictory characteristics; that is, you cannot be both at the same time. The numbers form a scale from one extreme to another. You are to choose a number that describes where you fall on the scale.

1. Not at all aggressive	0 1 2 3 4 5 6 7	Very aggressive
2. Not at all independent	0 1 2 3 4 5 6 7	Very independent
3. Not at all emotional	0 1 2 3 4 5 6 7	Very emotional
4. Very submissive	0 1 2 3 4 5 6 7	Very dominant
5. Not at all excitable in a major crisis	0 1 2 3 4 5 6 7	Very excitable in a major crisis
6. Very passive	0 1 2 3 4 5 6 7	Very active
7. Not at all able to devote self completely to others	0 1 2 3 4 5 6 7	Able to devote self completely to others
8. Very rough	0 1 2 3 4 5 6 7	Very gentle
9. Not at all helpful to others	0 1 2 3 4 5 6 7	Very helpful to others
10. Not at all competitive	0 1 2 3 4 5 6 7	Very competitive
11. Very home oriented	0 1 2 3 4 5 6 7	Very worldly
12. Not at all kind	0 1 2 3 4 5 6 7	Very kind
13. Indifferent to others' approval	0 1 2 3 4 5 6 7	Highly needful of others approval
14. Feelings not easily hurt	0 1 2 3 4 5 6 7	Feelings easily hurt
15. Not at all aware of the feelings of others	0 1 2 3 4 5 6 7	Very aware of feelings of others
16. Can make decisions easily	0 1 2 3 4 5 6 7	Has difficulty making decisions
17. Gives up very easily	0 1 2 3 4 5 6 7	Never gives up easily

Fi︓à︓tial Discl s︐r︐e/F︐︐ di︓g

Refe︐e︓ces

Amaro, H., Blake, S., Schwartz, P. M., & Flinchbaugh, L. J. (2001). Developing theory-based substance abuse prevention programs for young adolescent girls. Journal of Early Adolescence*, 21*, 256-293.

Anderson, T., Daly, K., & Rapp, L. (2009). Clubbing masculinities and crime: A qualitative study of Philadelphia nightclub scenes. Feminist Criminology*, 4*, 302-332.

Bachman, R., & Peralta, R. (2002). The relationship between alcohol and violence in an adolescent population: Does gender matter? ︐ ︐ ︐ ︐*, 23*, 1-19.

Ballard-Reisch, D., & Ekon, M. (1992). Gender orientation and the Bem sex role inventory: A psychological construct revisited. Sex Roles*, 27*, 291-306.

Bauman, A., & Phongsaven, P. (1999). Epidemiology of substance abuse in adolescence: Prevalence, trends, and policy implications. ︐ ︐ ︐ & ︐ ︐ ︐ ︐ ︐ ︐ ︐ ︐*, 55*, 187-207.

Bem, S. L. (1974). The measurement of psychological androgyny. Journal of Counseling and Clinical Psychology*, 42*, 155-162.

Bem, S. L. (1981). Gender schema theory: A cognitive account of sex-typing. ︐ ︐ ︐ ︐ ︐ ︐*, 25*, ︐0*.

Cohen, D., & Lederman, L. (1995). Navigating the freedoms of college life: Students talk about alcohol, gender, and sex. In N. Roth & L. K. Fuller (Eds.), . New York: Haworth.

Connell, R., & Messerschmidt, J. W. (2005). Hegemonic masculinity: Rethinking the concept. *, 1*, 829-859.

Cook, E. P. (1985). . Elmsford, NY: Pergamon.

Costos, D. (1990). Gender role identity from an ego developmental perspective. *, 22*, 723-741.

O'Malley, P., & Johnston, L. (2002). Epidemiology of alcohol and other drug use among American college students. *14*, 23-39.

Peralta. (2007). College alcohol use and the embodiment of hegemonic masculinity among European American men. *56*, 741-756.

Petrie, D. J., Doran, C., Shakesaft, A., & Sanson-Fisher, R. (2010). The relationship between risky alcohol consumption, crime and traffic accidents in Australian rural communities. *35*, 359-362.

Poulin, C., MacNeil. P., & Mitic, W. (1993). The validity of a province-wide student drug use survey: Lessons in design. *84*, 259-264.

Ricciardelli, L. A., Connor, J. P., Williams, R. J., & Young, R. M. (2001). Gender stereotypes and drinking cognitions as indicators of moderate and high risk drinking among young women and men. *6*, 129-136

Robbins, C. (1981). Sex differences in psychosocial consequences of alcohol and drug abuse. *20*, 117-130.

Schacht, S. P. (1996). Misogyny on and off the "pitch." *10*, 550-565.

Shifren, K., Furnham, A., & Bauserman, R. (2003). Emerging adulthood in American and British samples: Individuals' personality and health risk behaviors. *10*, 75.

Snell, W., Jr., Belk, S., & Hawkins, R., II. (1987). Alcohol and drug use in stressful times: The influence of the masculine role and sex-related personality attributes. *16*, 359-373.

Wechsler, H., Seibring, M., I-chao Liu, M., & Ahl, M. (2004). Colleges respond to student binge drinking: Reducing student demand or limiting access. *Journal of American College Health, 52*, 159-68.

Wechsler, H., & Wuethrich, B. (2002). *Dying to drink: Confronting binge drinking on college campuses*. Emmaus, PA: Rodale Customer Service.

West, C., & Zimmerman, D. H. (1987). Doing gender. *Gender & Society, 1*, 125-151.

White, H. R., Hansell, S., & Brick, J. (1993). Alcohol use and aggression among youth. *Alcohol Health & Research World, 17*(2), 144-151.

White, H. R., Tice, P., Loeber, R., & Stouthamer-Loeber, M. (2002). Illegal acts committed by adolescents under the influence of alcohol and drugs. *Journal of Research in Crime and Delinquency, 3* (2), 131-152.

Wilsnack, R. W., & Wilsnack, S. C. (1997). *Gender and alcohol: Individual and social perspectives*. New Brunswick, NJ: Rutgers Center of Alcohol Studies.

Wilson, G., Pritchard, M., & Schaffer, J. (2004). Athletic status and drinking behavior in college students: The influence of gender and coping styles. *Journal of American College Health, 52*, 269-273.

Winters K. C., Stinchfield, R. D., Henly, G. A., & Schwartz, R. H. (1991). Validity of adolescent self-report of alcohol and other drug involvement. *International Journal of the Addictions, 25*, 1379-1395.

Wong, F. Y., McCreary, D. R., & Duffy, K. C. (1990). A further validation of the Bem sex role inventory: A multitrait-multimethod study. *Sex Roles, 22*, 249-259.

Young, A. M., Morales, M., McCabe, E. S., Boyd, C. J., & D'Arcy, H. (2005). Drinking like a guy: Frequent binge drinking among undergraduate women. *Substance Use & Misuse, 40*, 241-267.

Bios

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