

## BRIEF REPORT

## Linking Alcohol-Specific Masculine Norms and Drinking Behavior Among Latino Men

Jessica K. Perrotte  
Texas State UniversityByron L. Zamboanga  
Smith CollegeNathan Kearns  
The University of North Texas

A robust literature suggests men typically engage in more general and heavy alcohol use than women, and that many health disparities related to drinking are more prevalent among Latino men compared with non-Latino White men. Researchers posit that adherence to masculine gender role scripts may be one reason men choose to drink alcohol. To date, research linking masculinity to drinking among Latinos has been mixed and has used broad measures for masculinity that are arguably quite distal from alcohol outcomes. Thus, the primary aim of this study was to prospectively examine the link between previous bidimensional conceptualizations of masculinity among Latino men (i.e., machismo) and drinking while incorporating a more proximal, alcohol-specific measure of masculinity. Using data collected from two time points, results indicated that baseline endorsements of masculine norms characterized by drinking to excess were robustly related to both general and problematic alcohol use 6 months later. Conversely, baseline endorsements of masculine norms characterized by controlled drinking were related to later reductions of alcohol-related problems. Broader bidimensional measures of machismo (i.e., traditional machismo and caballerismo) at baseline were also included in each model and were unrelated to later general and problematic drinking. These data suggest there is merit to employing masculinity scales that more specifically capture the role of masculinity on alcohol outcomes among Latino emerging adults. In doing this, findings pertaining to masculinity and drinking may be more easily translated into prevention and intervention settings.


**Public Significance Statement**

Numerous studies support the notion that men are socialized through environmental masculine norms to believe drinking—particularly to excess—is a characteristic of manhood, but masculinity measures typically used in the literature are broad and distal, which may render drawing specific conclusions about the link between masculine norms and drinking somewhat difficult. In this study of Latino men, we examine the relations between a broad measure of masculinity often used in alcohol research (e.g., machismo) and drinking, while also including a measure of alcohol-specific masculine norms. By increasing the specificity of the masculine norms measures as related to alcohol use, findings can be more easily applied to prevention and intervention settings.

*Keywords:* masculine norms, machismo, alcohol, Hispanic, Latino

Literature indicates that men consume more alcohol and participate in heavy drinking more than women (see Erol & Karpyak, 2015, for review). Researchers posit that one major factor account-

ing for this difference in alcohol use is gender role prescriptions (Mahalik, Lombardi, Sims, Coley, & Lynch, 2015). Through environmental norms, men may be socialized to believe drinking is

 Jessica K. Perrotte, Department of Psychology, Texas State University; Byron L. Zamboanga, Department of Psychology, Smith College; Nathan Kearns, Department of Psychology, The University of North Texas.

Jessica K. Perrotte was supported by the National Institute on Alcohol Abuse and Alcoholism of the National Institutes of Health under Award F31AA02647. Nathan Kearns was supported by the National Institute on Alcohol Abuse and Alcoholism of the National Institutes of Health under

Award F31AA027142. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health. We would like to express thanks to Michael R. Baumann for his substantial contributions during data collection for this project.

Correspondence concerning this article should be addressed to Jessica K. Perrotte, Department of Psychology, Texas State University, Undergraduate Academic Center 253, 601 University Drive, San Marcos, TX 78666. E-mail: j\_p797@txstate.edu

a component of masculinity. Some literature suggests alcohol use is an expression of masculinity, and the way men engage in alcohol-related behaviors can be considered a performance of the masculine gender role (Courtenay, 2000; Peralta, 2007; Wilkinson, Fleming, Halpern, Herring, & Harris, 2018). A multitude of harms can result from drinking (National Institute on Alcohol Abuse and Alcoholism, 2019), and importantly, research shows that Latino men experience more of numerous adverse consequences related to alcohol use than non-Latino White men (Witbrodt, Mulia, Zemore, & Kerr, 2014). Along those lines, there is a call for researchers to better inform culturally tailored intervention programs (Zemore et al., 2018). Therefore, a better understanding of how masculinity relates to alcohol use/misuse is needed, particularly within populations that are at risk for disproportionately experiencing alcohol-related problems.

There is a growing body of research that has examined the link between masculinity and alcohol use/misuse among Hispanic/Latino (referred to for the remainder of this article as Latino) men (Perrotte & Zamboanga, 2019). Previous research indicates that *machismo*, a bidimensional gender role studied extensively among Latinos (Arciniega, Anderson, Tovar-Blank, & Tracey, 2008), is predictive of problematic drinking behavior in this population. For instance, research suggests a hypermasculine dimension of machismo (i.e., *traditional machismo*) is linked to general alcohol use and binge drinking, and a more positive dimensions of machismo (i.e., *caballerismo*) may be protective against binge drinking among Latinos (Arciniega et al., 2008; Perrotte, Baumann, & Knight, 2018).

According to a recent review, the link between traditional masculine gender roles and alcohol use/misuse among Latinos is inconsistent, and one reason for this inconsistency is due to measurement (Perrotte & Zamboanga, 2019). More specifically, studies linking masculinity and drinking behavior typically use broad measures of masculinity (Clinkinbeard & Barnum, 2017; Kissinger et al., 2013; Miller et al., 2014). For instance, some studies examine associations between drinking and masculine norms characterized by “winning,” being a “playboy,” and “risk-taking” (Iwamoto, Corbin, Lejuez, & MacPherson, 2014; Zamboanga, Audley, Iwamoto, Martin, & Tomaso, 2017). The machismo masculine script is also broad, with one dimension (i.e., traditional machismo) characterized by aggression, risk-taking, and power over women, whereas the other dimension (i.e., caballerismo) is characterized by respect, chivalry, and politeness (Arciniega et al., 2008). Because of the distal nature of the way masculinity is operationalized in the alcohol literature, significant (or nonsignificant) associations may be difficult to interpret and less easily translated into intervention settings.

The primary aim of this study was to prospectively examine masculine norms and alcohol use/misuse among Latinos by using a preexisting bidimensional measure of machismo beliefs (i.e., the Traditional Machismo and Caballerismo Scale [TMCS]; Arciniega et al., 2008), as well as a Masculine Drinking Norms Measure (MDNM) modeled from the TMCS that was developed for this study. Because the MDNM was modeled directly after the TMCS, we expected a factor analysis to identify two MDNM dimensions. The first dimension was expected to be characterized by excessive drinking and to be positively related to both general and problematic use. The second dimension was expected to be characterized by more controlled drinking, and protective against alcohol use.

Further, as drinking-specific masculine norms are conceptually more proximal to drinking behaviors among men, we expected the dimensions of the MDNM to predict alcohol outcomes above and beyond the TMCS dimensions using a multiple regression framework. By exploring more proximal masculine norms to alcohol use/misuse, this study is an important first step to helping improve our theoretical understanding of drinking-related differences among Latino men.

## Method

### Participants and Procedure

All procedures for this study were approved by the institutional review board at Jessica K. Perrotte’s previous institution, where data were collected. These data were collected as part of a larger longitudinal effort examining traditional gender roles and alcohol use among Latinx emerging adult men and women (ages 18–25; Arnett, 2000). A mass e-mail was sent to all incoming freshmen at a southwestern university who self-identified as Hispanic/Latinx, inviting them to participate in an online, two-wave study. Of these, 570 students (38% male) met inclusion criteria (being between 18 and 25, unmarried, and being a first-time ever college student). The current study includes only the men in the sample ( $N = 218$ ). The first wave occurred the summer before beginning their first semester (T1), before coming in extended and sustained contact with the university environment. Data collection was restricted to a 2-week duration during the summer beginning the last week of July, so collection ended before students moved into campus residencies. Participants were invited to take part in a second wave of the study during the spring of their second semester (T2). Alcohol consumption can fluctuate considerably during the first year of college and peak for many students during extended holidays such as spring break (Tremblay et al., 2010). Therefore, T2 spring data collection was restricted to a 2-week duration that began in the last week of February, so all responses were collected before spring break began. The questionnaire at each wave took approximately 30–45 min to complete. Participants were compensated at each wave with gift cards.

### Measures

**Machismo.** We measured two dimensions of machismo beliefs using the TMCS (Arciniega et al., 2008). Both Traditional machismo (10 items, e.g., “It is important not to be the weakest man in the group”) and caballerismo (10 items, e.g., “Men must display good manners in public”) were rated on a 7-point scale (1 = *strongly disagree*) and exhibited good internal consistency ( $\alpha = .79$  and  $.80$  for traditional machismo and caballerismo, respectively).

**Masculine drinking norms.** We assessed masculine drinking norms with the MDNM, developed by Jessica K. Perrotte and Byron L. Zamboanga for this study and modeled after the traditional machismo and caballerismo constructs (Arciniega et al., 2008), described above. Three items mapped onto traditional machismo (e.g., “It is important not to be the ‘lightweight’ drinker in the group”) and three items mapped onto caballerismo (e.g., “Men must always display good manners in public, even if he has had a lot to drink”). Items were rated on a 7-point scale (1 = *strongly*

*disagree*) and were labeled “excess” ( $\alpha = .79$ ) and “control” ( $\alpha = .73$ ), respectively.

**Drinking behaviors.** We assessed four drinking behavior variables (i.e., estimated drinking frequency, estimated drinking quantity, binge drinking, and alcohol-related problems). Both estimated past-30 day drinking frequency and estimated past-30 day drinking quantity were measured using the Daily Drinking Questionnaire–Revised (Kruse, Fromme, & Corbin, 2005); participants self-reported how many times they engaged in alcohol use on each day of the week in the past month (summed for estimated frequency) and how many standardized drinks they estimated drinking on each day of the week during the past month (multiplied with the frequency of each day and summed, for total estimated quantity). A measure for binge drinking frequency was adapted from the Daily Drinking Questionnaire–Revised, in which participants reported how many times they consumed 5+ drinks one each day of the week in the past month. Responses were summed to indicate a total estimate of past-month binge drinking frequency. Alcohol-related problems were measured using the 16-item version of the Rutgers Alcohol Problems Index (S-RAPI; Earleywine, LaBrie, & Pedersen, 2008). Participants responded with a 5-point scale (0 = 0 times; 5 = more than 10 times), and items were summed, yielding a total measure of alcohol-related problems.

**Covariates.** Regression analyses included two covariates. These were T2 living arrangements (dichotomous variable: live with childhood family or not) and T2 relationship status (dichotomous variable: single or not).

## Results

### Preliminary Analyses

Data were analyzed using SPSS 22 (IBM Corp., 2013) and Mplus Version 8 (Muthén & Muthén, 1998–2018). Nine careless responses were identified (Meade & Craig, 2012) and omitted from the data set, yielding an analytic sample of 207 Latino men at T1 and 84 at T2. At T1, participants were an average of 18.08 ( $SD = .38$ ) years old, and 82% identified as being of Mexican descent. Most (70.5%) lived with their childhood family and were single (65.7%). Alcohol variable values  $>3$  standard deviations ( $SD$ ) units above the mean were deemed outliers (Tabachnik & Fidell, 2007) and were constrained to a value of 3  $SD$  units above the mean, rounded to the nearest whole number, allowing analyses to capture overall trends while attenuating outliers’ impact.

Attrition analyses consisted of regressing each T2 alcohol variable onto a dichotomous missingness variable (1 = T2 missingness) using a negative binomial strategy (Gardner, Mulvey, & Shaw, 1995), and then regressing each T2 predictor onto missingness using linear regression. Data showed that missingness was unrelated (i.e.,  $p > .05$ ) to all study variables of interest.

### Primary Analyses

**Exploratory structural equation modeling.** Exploratory structural equation modeling (ESEM), a technique that integrates both exploratory and confirmatory factor analytic approaches (Marsh, Morin, Parker, & Kaur, 2014), was conducted to assess the structure of the MDNM. ESEM allows researchers a priori control when specifying an underlying factor structure and is advantageous when there are a priori assumptions underlying a measure. Given that the MDNM items were modeled after two preexisting dimensions of masculine norms (i.e., traditional machismo and caballerismo), ESEM was deemed appropriate. Items were first specified to load onto a single-factor and two-factor solution in consecutive models. The final model was selected using a comparison of fit indices (for recommended thresholds, see Hu & Bentler, 1999) and an inspection of factor loadings guided by the overarching theories described previously. Data indicated a single factor was not acceptable,  $\chi^2(9) = 134.44$ ,  $p < .001$ ; root mean square error of approximation = .26; comparative fit index = .59; standardized root mean square residual = .16, and only three items loaded highly onto the factor (i.e.,  $\beta > .4$  and  $p < .001$ ). The expected two-factor solution fit the data well,  $\chi^2(4) = 4.13$ ,  $p = .388$ ; root mean square error of approximation = .01; comparative fit index = 1.00; standardized root mean square residual = .01, and supported dimensions of masculine drinking norms characterized by excess and control. See Table 1 for list of items with factor loadings.

**Test–retest reliability.** To assess test–retest reliability, intraclass correlation coefficients (ICCs) were calculated for each subscale on the MDNM (Weir, 2005). We derived ICCs using two-way, mixed-effects models of average measure, absolute agreement (Koo & Li, 2016). Generally, ICC reliability estimates  $\geq .75$  = “excellent,” .60–.75 = “good,” .50–.60 = “fair,” and  $< .50$  = “poor” (Cicchetti, 1994; Fleiss, 1986). Results indicated good test–retest reliability for the Excess subscale (ICC = .70), fair test–retest reliability for the Control subscale (ICC = .56), and good test–retest reliability for the overall measure (ICC = .73).

Table 1  
*Items and Factor Loadings of the MDNM*

Item	Excess	Control
A real man can drink a lot	.77	
Men should respect those who can drink a lot.	.70	
It is important not to be the “lightweight drinker” in the group.	.77	
A real man knows when he’s had enough to drink and is able to stop.		.67
It would be shameful for a man to lose his cool in social drinking situations.		.71
Men must always display good manners in public, even if he has had a lot to drink.		.68

*Note.*  $N = 207$ . MDNM = Masculine Drinking Norms Measure. Standardized factor loadings are reported; all loadings are significant at  $p < .001$ .

**Correlation and regression analyses.** We conducted a zero-order correlation analysis including excess, control, traditional machismo, and caballerismo to support the convergent validity of the MDNM. As expected, results showed that excess was highly related to traditional machismo and control was highly related to caballerismo (see Table 2).

Four negative binomial regression analyses (Gardner et al., 1995) assessed the incremental relations of excess and control at T1 on each of the four alcohol outcomes at T2 (i.e., estimated frequency, estimated quantity, binge drinking, and alcohol related problems), including traditional machismo and caballerismo in each model (see Table 3). Negative binomial regression was used due to the heavily skewed count-natured distribution of the respective alcohol outcomes. This is considered a more flexible approach than Poisson regression, allowing for the overdispersion of data (Horton, Kim, & Saitz, 2007). Neither traditional machismo nor caballerismo at T1 were related to any alcohol variable at T2. Excess emerged as a strong, positive predictor in each of the four models, and a protective link emerged between control and alcohol-related problems.

## Discussion

This study examined the association between machismo and alcohol use/misuse using a measure of masculine-specific drinking norms (i.e., the MDNM), which is more proximal to alcohol-related outcomes than other masculine measures in the literature. Results indicated a two-factor solution for the MDNM, one characterized by excessive drinking and the other characterized by controlling behavior while drinking. As expected, the more conceptually proximal MDNM was robustly related to several indices of drinking across two time points, whereas the TMCS was unrelated. The null relations between the two respective dimensions of machismo and alcohol use in this study are consistent with some previous research that did not find an association between machismo and drinking behavior (Kissinger et al., 2013). These findings underscore the importance of considering the more specific mechanisms by which broad measures of masculinity such as machismo may be related to drinking behaviors.

Across all analyses, excess emerged as a positive predictor of each drinking outcome. However, control emerged as a protective factor only when endorsing later alcohol-related problems. This suggests that, rather than prescribing whether a man should or should not drink, control prescribes the behavior a man should

engage in once drinking has started. Thus, these findings highlight how the role of masculine drinking norms do not end with the decision to drink. Rather, positive forms of masculine drinking norms may be enacted once alcohol use has commenced, attenuating some harmful consequences of drinking. That is, a man who endorses the control dimension of the MDNM can view drinking as normative masculine behavior and consequently choose to drink, but also choose to refrain from drinking in a hazardous manner.

Importantly, the fair test-retest reliability for the control subscale indicates that the control dimension may shift over time. This sample was composed of individuals transitioning from adolescence to emerging adulthood, which, according to theories of psychosocial development (see Arnett, 2000; Erikson, 1963), is a time when individuals are exploring how they align with socially prescribed roles. It may be that, whereas excess is a stereotypical aspect of a (hyper)masculine gender role more readily available (e.g., through media portrayals; Greenwood & Lippman, 2010), control may be less rigidly defined and thus more malleable. As such, the bidimensional nature of the MDNM may have utility in the context of prevention and intervention strategies. For example, in a tailored brief motivational intervention setting, practitioners could help young men reframe potentially negative stereotypical perceptions of the link between masculinity and alcohol use and instead foster the internalization of masculine drinking norms pertaining to control. These intervention implications may be particularly important to deter Latinos from drinking heavily, as health disparities research indicates Latino men are disproportionately more likely to develop alcohol dependence and experience alcohol-related problematic health outcomes than Non-Latino White men at low levels of heavy drinking (Chartier & Caetano, 2010; Witbrodt et al., 2014).

Although the sample size at T1 allowed for enough power to assess the underlying factor structure and convergent validity of the MDNM, interpretation of these findings must be considered in light of the T2 attrition. Substantial attrition rates are often found in longitudinal studies of college students (Cheng & Mallinckrodt, 2015; McCoy et al., 2009; Respondek, Seufert, Hamm, & Nett, 2019). Attrition may have been due to several factors. For one, T1 in this study occurred the summer before participants' freshman year, and many students may not have continued college after the first semester. Research examining Latinx college enrollment in Texas suggests that they are at greater risk for dropping out of college than non-Latinx White students (Tajalli & Ortiz, 2018).

Another strength of this study is that the MDNM maps onto existing masculine norms measures for Latinos (i.e., traditional machismo and caballerismo; Arciniega et al., 2008). However, this strength may also limit the generalizability of the findings. Although the items on the MDNM were derived to be inclusive of diverse populations (i.e., using nonethnoracial-specific language), future research should validate the MDNM using confirmatory approaches (e.g., confirmatory factor analysis) with other populations in the context of other broad measures of masculine norms often examined in relation to drinking in the extant literature (e.g., Conformity to Masculine Norms Inventory-46; Parent & Moradi, 2009). Additionally, applications of the MDNM may not be limited to cis-gender males. Future research should also explore the manner in which these masculine norms inform drinking behavior in nongender conforming populations (e.g., nonbinary, gender-

Table 2  
*Zero-Order Correlations Between MDNM and TMCS*

Variable	Excess	Control	Traditional machismo	Caballerismo
Excess	—	.10	.52*	-.09
Control	.09	—	.07	.53*
Traditional machismo	.43*	.05	—	.02
Caballerismo	-.05	.49*	.12	—

*Note.* MDNM = Masculine Drinking Norms Measure; TMCS = Traditional Machismo and Caballerismo Scale; T1 = first semester; T2 = second semester. T1 correlations ( $N = 207$ ) are displayed below the diagonal, and T2 correlations ( $N = 89$ ) are displayed above the diagonal. \*  $p < .05$ .

Table 3  
Temporal Negative Binomial Regression Analyses

Predictor	<i>B</i>	<i>SE</i>	IRR	LLCI	ULCI	<i>p</i>	<i>B</i>	<i>SE</i>	IRR	LLCI	ULCI	<i>p</i>
	Estimated frequency (T2)						Estimated quantity (T2)					
Traditional machismo (T1)	.02	.20	1.02	0.69	1.49	.941	.15	.19	1.16	0.80	1.67	.442
Caballerismo (T1)	-.14	.23	0.87	0.55	1.37	.561	-.14	.25	0.87	0.53	1.41	.583
Excess (T1)	<b>.42</b>	<b>.11</b>	<b>1.52</b>	<b>1.22</b>	<b>1.91</b>	<b>&lt;.001</b>	<b>.53</b>	<b>.11</b>	<b>1.71</b>	<b>1.39</b>	<b>2.13</b>	<b>&lt;.001</b>
Control (T1)	-.07	.14	0.93	0.71	1.23	.605	-.02	.12	0.98	0.76	1.25	.887
	Binge drinking frequency (T2)						Alcohol-related problems (T2)					
Traditional machismo (T1)	-.15	.29	0.86	0.48	1.52	.604	.37	.19	1.44	1.00	2.13	.056
Caballerismo (T1)	-.16	.38	0.86	0.40	1.80	.679	.29	.27	1.34	0.80	2.29	.272
Excess (T1)	<b>.76</b>	<b>.20</b>	<b>2.13</b>	<b>1.48</b>	<b>3.24</b>	<b>&lt;.001</b>	<b>.37</b>	<b>.14</b>	<b>1.44</b>	<b>1.11</b>	<b>1.90</b>	<b>.007</b>
Control (T1)	.09	.31	1.09	0.61	2.08	.778	<b>-.37</b>	<b>.19</b>	<b>0.69</b>	<b>0.48</b>	<b>0.99</b>	<b>.048</b>

Note. *N* = 85. IRR = incident rate ratio; LLCI and ULCI = 95% lower limit and upper limit confidence intervals for IRR, respectively; T1 = first semester; T2 = second semester. All analyses controlled for respective alcohol outcome at T1 as well as T2 living arrangements and relationship status. Significant effects are highlighted in bold.

fluid). Finally, this study is potentially limited by self-report bias, as most participants were under the legal drinking age and may have underreported their drinking behavior.

In conclusion, this study's findings suggest there is merit in exploring how drinking may be incorporated into an overarching masculine gender role script with more specificity than masculine norms measures currently used in alcohol research. This study is an important first step toward shifting from broad masculine norms to more specific masculine norms pertaining to drinking behaviors. Continuing the examination of drinking-specific masculine norms in this way affords more direct translation to intervention and prevention programming for Latino, and perhaps other, emerging adult men.

## References

- Arciniega, G. M., Anderson, T. C., Tovar-Blank, Z. G., & Tracey, T. J. (2008). Toward a fuller conception of machismo: Development of a Traditional Machismo and Caballerismo Scale. *Journal of Counseling Psychology, 55*, 19–33. <http://dx.doi.org/10.1037/0022-0167.55.1.19>
- Arnett, J. J. (2000). Emerging adulthood. A theory of development from the late teens through the twenties. *American Psychologist, 55*, 469–480. <http://dx.doi.org/10.1037/0003-066X.55.5.469>
- Chartier, K., & Caetano, R. (2010). Ethnicity and health disparities in alcohol research. *Alcohol Research and Health, 33*, 152–160.
- Cheng, H. L., & Mallinckrodt, B. (2015). Racial/ethnic discrimination, posttraumatic stress symptoms, and alcohol problems in a longitudinal study of Hispanic/Latino college students. *Journal of Counseling Psychology, 62*, 38–49. <http://dx.doi.org/10.1037/cou0000052>
- Cicchetti, D. V. (1994). Guidelines, criteria, and rules of thumb for evaluating normed and standardized assessment instruments in psychology. *Psychological Assessment, 6*, 284–290.
- Clinkinbeard, S. S., & Barnum, T. C. (2017). Gendered self-concepts and drinking behavior in a national sample of emerging adults. *Feminist Criminology, 12*, 145–170. <http://dx.doi.org/10.1177/1557085115614391>
- Courtenay, W. H. (2000). Constructions of masculinity and their influence on men's well-being: A theory of gender and health. *Social Science and Medicine, 50*, 1385–1401. [http://dx.doi.org/10.1016/S0277-9536\(99\)00390-1](http://dx.doi.org/10.1016/S0277-9536(99)00390-1)
- Earleywine, M., LaBrie, J. W., & Pedersen, E. R. (2008). A brief Rutgers Alcohol Problem Index with less potential for bias. *Addictive Behaviors, 33*, 1249–1253. <http://dx.doi.org/10.1016/j.addbeh.2008.05.006>
- Erikson, E. H. (1963). *Youth: Change and challenge*. New York, NY: Norton.
- Erol, A., & Karpyak, V. M. (2015). Sex and gender-related differences in alcohol use and its consequences: Contemporary knowledge and future research considerations. *Drug and Alcohol Dependence, 156*, 1–13. <http://dx.doi.org/10.1016/j.drugalcdep.2015.08.023>
- Fleiss, J. L. (Ed.). (1986). Reliability of measurement. In *The design and analysis of clinical experiments* (pp. 1–32). New York, NY: Wiley.
- Gardner, W., Mulvey, E. P., & Shaw, E. C. (1995). Regression analyses of counts and rates: Poisson, overdispersed Poisson, and negative binomial models. *Psychological Bulletin, 118*, 392–404. <http://dx.doi.org/10.1037/0033-2909.118.3.392>
- Greenwood, D. N., & Lippman, J. R. (2010). Gender and media: Content, uses, and impact. In J. Chrisler & D. McCreary (Eds.), *Handbook of gender research in psychology* (pp. 643–670). New York, NY: Springer. [http://dx.doi.org/10.1007/978-1-4419-1467-5\\_27](http://dx.doi.org/10.1007/978-1-4419-1467-5_27)
- Horton, N. J., Kim, E., & Saitz, R. (2007). A cautionary note regarding count models of alcohol consumption in randomized controlled trials. *BMC Medical Research Methodology, 7*, 9. <http://dx.doi.org/10.1186/1471-2288-7-9>
- Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6*, 1–55. <http://dx.doi.org/10.1080/10705519909540118>
- IBM Corp. (2012). IBM SPSS statistics for windows (Version 22) [Computer software]. Armonk, NY: Author.
- Iwamoto, D. K., Corbin, W., Lejuez, C., & MacPherson, L. (2014). College men and alcohol use: Positive expectancies as a mediator between distinct masculine norms and alcohol use. *Psychology of Men and Masculinity, 15*, 29–39. <http://dx.doi.org/10.1037/a0031594>
- Kissinger, P., Althoff, M., Burton, N., Schmidt, N., Hembling, J., Salinas, O., & Shedlin, M. (2013). Prevalence, patterns and predictors of substance use among Latino migrant men in a new receiving community. *Drug and Alcohol Dependence, 133*, 814–824. <http://dx.doi.org/10.1016/j.drugalcdep.2013.08.031>
- Koo, T. K., & Li, M. Y. (2016). A guideline of selecting and reporting intraclass correlation coefficients for reliability research. *Journal of Chiropractic Medicine, 15*, 155–163. <http://dx.doi.org/10.1016/j.jcm.2016.02.012>
- Kruse, M. I., Fromme, K., & Corbin, W. R. (2005). Improving the accuracy of self-report measures of drinking: Disaggregating quantity and frequency indices of alcohol consumption. *Alcoholism, Clinical and Experimental Research, 29*, 118A.

- Mahalik, J. R., Lombardi, C. M., Sims, J., Coley, R. L., & Lynch, A. D. (2015). Gender, male-typicality, and social norms predicting adolescent alcohol intoxication and marijuana use. *Social Science and Medicine*, *143*, 71–80. <http://dx.doi.org/10.1016/j.socscimed.2015.08.013>
- Marsh, H. W., Morin, A. J., Parker, P. D., & Kaur, G. (2014). Exploratory structural equation modeling: An integration of the best features of exploratory and confirmatory factor analysis. *Annual Review of Clinical Psychology*, *10*, 85–110. <http://dx.doi.org/10.1146/annurev-clinpsy-032813-153700>
- McCoy, T. P., Ip, E. H., Blocker, J. N., Champion, H., Rhodes, S. D., Wagoner, K. G., . . . Wolfson, M. (2009). Attrition bias in a U.S. Internet survey of alcohol use among college freshmen. *Journal of Studies on Alcohol and Drugs*, *70*, 606–614. <http://dx.doi.org/10.15288/jsad.2009.70.606>
- Meade, A. W., & Craig, S. B. (2012). Identifying careless responses in survey data. *Psychological Methods*, *17*, 437–455. <http://dx.doi.org/10.1037/a0028085>
- Miller, P., Wells, S., Hobbs, R., Zinkiewicz, L., Curtis, A., & Graham, K. (2014). Alcohol, masculinity, honour and male barroom aggression in an Australian sample. *Drug and Alcohol Review*, *33*, 136–143. <http://dx.doi.org/10.1111/dar.12114>
- Muthén, L. K., & Muthén, B. O. (1998–2018). *Mplus user's guide* (8th ed.). Los Angeles, CA: Author.
- National Institute on Alcohol Abuse and Alcoholism. (2019). *Alcohol facts and statistics*. Retrieved from <https://www.niaaa.nih.gov/publications/brochures-and-fact-sheets/alcohol-facts-and-statistics>
- Parent, M. C., & Moradi, B. (2009). Confirmatory factor analysis of the Conformity to Masculine Norms Inventory and development of the Conformity to Masculine Norms Inventory-46. *Psychology of Men and Masculinity*, *10*, 175–189. <http://dx.doi.org/10.1037/a0015481>
- Peralta, R. L. (2007). College alcohol use and the embodiment of hegemonic masculinity among European American men. *Sex Roles*, *56*, 741–756. <http://dx.doi.org/10.1007/s11199-007-9233-1>
- Perrotte, J. K., Baumann, M. R., & Knight, C. F. (2018). Traditional gender roles and the stress-alcohol relationship among Latina/o college students. *Substance Use and Misuse*, *53*, 1700–1705. <http://dx.doi.org/10.1080/10826084.2018.1429472>
- Perrotte, J. K., & Zamboanga, B. L. (2019). Traditional gender roles and alcohol use among Latina/os: A review of the literature. *Journal of Ethnicity in Substance Abuse*. Advance online publication. <http://dx.doi.org/10.1080/15332640.2019.1579142>
- Respondek, L., Seufert, T., Hamm, J. M., & Nett, U. E. (2019). Linking changes in perceived academic control to university dropout and university grades: A longitudinal approach. *Journal of Educational Psychology*. Advance online publication. <http://dx.doi.org/10.1037/edu0000388>
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics*. Boston, MA: Allyn & Bacon.
- Tajalli, H., & Ortiz, M. (2018). An examination of Hispanic college enrollment and graduation: Has the Texas Closing the Gaps Plan been successful? *Journal of Latinos and Education*, *17*, 330–343. <http://dx.doi.org/10.1080/15348431.2017.1348301>
- Tremblay, P. F., Graham, K., Wells, S., Harris, R., Pulford, R., & Roberts, S. E. (2010). When do first-year college students drink most during the academic year? An internet-based study of daily and weekly drinking. *Journal of American College Health*, *58*, 401–411. <http://dx.doi.org/10.1080/07448480903540465>
- Weir, J. P. (2005). Quantifying test-retest reliability using the intraclass correlation coefficient and the SEM. *Journal of Strength and Conditioning Research*, *19*, 231–240.
- Wilkinson, A. L., Fleming, P. J., Halpern, C. T., Herring, A. H., & Harris, K. M. (2018). Adherence to gender-typical behavior and high frequency substance use from adolescence into young adulthood. *Psychology of Men and Masculinity*, *19*, 145–155. <http://dx.doi.org/10.1037/men0000088>
- Witbrodt, J., Mulia, N., Zemore, S. E., & Kerr, W. C. (2014). Racial/ethnic disparities in alcohol-related problems: Differences by gender and level of heavy drinking. *Alcoholism: Clinical and Experimental Research*, *38*, 1662–1670. <http://dx.doi.org/10.1111/acer.12398>
- Zamboanga, B. L., Audley, S., Iwamoto, D. K., Martin, J. L., & Tomaso, C. C. (2017). The risks of being “manly”: Masculine norms and drinking game motives, behaviors, and related consequences among men. *Psychology of Men and Masculinity*, *18*, 280–292. <http://dx.doi.org/10.1037/men0000064>
- Zemore, S. E., Karriker-Jaffe, K. J., Mulia, N., Kerr, W. C., Ehlers, C. L., Cook, W. K., . . . Greenfield, T. K. (2018). The future of research on alcohol-related disparities across U.S. racial/ethnic groups: A plan of attack. *Journal of Studies on Alcohol and Drugs*, *79*, 7–21. <http://dx.doi.org/10.15288/jsad.2018.79.7>

Received August 13, 2019

Revision received October 27, 2019

Accepted October 30, 2019 ■