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Traditional feminine gender roles, alcohol use, and protective behavioral strategies among Latina college students

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ABSTRACT

Objective: Studies conducted with Latina/o populations suggest there are gendered norms surrounding drinking behavior, but research examining alcohol use among Latina college students in the context of traditional feminine gender role (TFGR) norms, is scarce.
Participants and Methods: 405 Latina undergraduates completed a web-based study of sociocultural factors and alcohol use. Path analyses assessed the relation between TFGR , alcohol use, and alcohol-related protective behavioral strategies (PBS).
Results: A dimension of TFGR characterized by purity was related to (a) reduced alcohol use in general, and (b) PBS designed to modify the manner of drinking among drinkers. In turn, this dimension of PBS related to a lower likelihood of experiencing drunkenness.
Conclusions: These findings support the notion that enacting some dimensions of TFGR among Latina college students may limit general alcohol use (directly) and high-risk drinking (indirectly through use of PBS), while enacting other dimensions may place Latinas at risk of alcohol misuse.

Introduction

National reports indicate that alcohol use is prevalent among college women.[1] Research shows that women will attain higher blood alcohol concentration levels and will become intoxicated faster than men during the same drinking period.[2] Also, negative academic outcomes (e.g., lower grades) have been linked to hazardous alcohol use among college women.[3]

Past United States (U.S.) trends suggest menconsume more alcohol than women, although the gender gap is narrowing.[4] Gendered societal expectations for drinking may influence this gender gap. In general, women perceive that society discourages alcohol use for women more than men.[5] Some suggest that the societal prescriptions for drinking behavior may be more narrowly defined in some cultures than others. For instance, scholars suggest that norms discouraging health-risk behaviors among women (while encouraging the same behaviors among men) are particularly prevalent among many Latinx cultures.[6] Indeed, studies examining alcohol and other forms of substance use in relation to traditional Latinx gender roles indicate conformity to certain Latino gender roles (e.g., traditional machismo) is a risk factor for hazardous alcohol use (e.g., binge drinking among men),[7] while some aspects of Latina traditional feminine gender roles (TFGR), such as those related to virtue and chastity, may be inversely related to general substance use. To the extent that gendered patterns of drinking may

be explained by gender role prescriptions, studying characteristics of TFGR in relation to alcohol use outcomes is particularly warranted.[8]

An individual's engagement in alcohol use is influenced by norms transmitted through the immediate and distal environment.[9] Accordingly, the salience of alcohol-related norms may differ across contexts.[9] For many Latinas, attending college may provide a novel opportunity to engage with newly intersecting norms and identities. That is, some internalized traditional norms may be challenged by norms encountered in the college environment. Thus, if Latinx heritage culture discourages heavy drinking among women, the internalization of these norms may limit drinking behavior (as noted by Lee et al.[10]). However, given the prevalence of alcohol use among college women,[1] a Latina student may conform to the drinking norms of the college environment. In that case, it is still possible that the heritage cultural norms, such as some aspects ofTFGR, can limit heavy drinking. Therefore, it is important to go beyond examining the link between heritage cultural norms and general alcohol use, and to also explore how these norms may be enacted should alcohol be consumed.

Traditional feminine gender roles (TFGR)

Within a social constructionist framework, scholars posit that cultural norms provide a rubric for what it means to be 'men' and 'women'. Rather than existing somewhere within

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the individual, gender is instead an agentic enactment in response to perceived societal expectations and stereotypes.[11] Thus, if society prescribes different behaviors for men versus women, engagement in these behaviors can be conceived of as 'performing gender' (as noted by Wilkinson et al.[12]). When it comes to heavy alcohol use, researchers speculate that, in general, Latino men – but not Latina women – are encouraged to engage in this behavior.[13]

The label commonly used to describe Latina TFGR is *marianismo*. Historically, researchers have described *marianismo* as rooted in conceptualizations of the idyllic Virgin Mary.[14] Contemporary research demonstrates that *marianismo* is a complex system of Latina gender role prescriptions that are infused with Latinx cultural values (see Castillo et al.[15]). Under the guidelines of *marianismo*, among other things, a Latina is expected to be chaste, pure, deferent, and serve as the spiritual backbone for her family. Using a sample of Latina college students, Castillo and colleagues[15] created the Marianismo Beliefs Scale (MBS) so the construct could be measured in empirical research. The authors found *marianismo* was best characterized by five dimensions. Two of these suggest that a Latina should be a unifying form of strength for her family in general (i.e., 'Family Pillar') and a caretaker for their spirituality (i.e., 'Spiritual Pillar'). Two others suggest that Latinas should be subordinate, particularly to men (i.e., 'Subordinate to Others'), and exercise self-repression (i.e., 'Silencing Self to maintain harmony'). The fifth indicates that Latinas should also behave in a manner that would be considered pure (i.e., 'Virtuous and Chaste'). Importantly, Latina women vary on their internalization and/or adherence to these various dimensions.[7,15] For example, a Latina might strongly endorse 'Family Pillar,' but not endorse 'Subordinate to Others,' or exhibit any number of patterns of differential endorsements across dimensions.

TFGR beliefs and alcohol use

The link between TFGR beliefs characterized by *marianismo* among Latinas and drinking behavior is not well understood, due in part to limited research on this topic. A recent literature review highlights the mixed nature of the associations between TFGR beliefs and alcohol use.[16] For example, researchers found that beliefs that emphasized feminine subservience and purity were inversely related to alcohol use for Latina adolescents.[17] Another study of Latina adolescents indicated a negative link between a feminine identity characterized by affective femininity (e.g., nurturance, empathy) and drinking frequency. Furthermore, the same study found that affective femininity was particularly protective against high risk drinking for Latinas who were not as oriented to mainstream U.S. culture.[18] More recently, a study[7] examined TFGR beliefs and alcohol use among Latina college students and collapsed the five dimensions of the MBS[15] into two, similar to a previous study examining TFGR beliefs operationalized as *marianismo* in relation to academic outcomes.[19] The first dimension, called positive *marianismo*, was comprised of three MBS dimensions characterized by

virtue, familial strength, and spiritual strength. The second dimension, called negative *marianismo*, was comprised of two MBS dimensions characterized by self-repression and subordination. These two composite dimensions were previously labeled as "positive" and "negative" due to their respective relations with better and poorer academic outcomes.[19] In terms of alcohol use, however, research did not support a main effect between either "positive" or "negative" marianismo and drinking (e.g., general alcohol use or binge drinking).[7]

The reasons for the null main effects from Perrotte et al.[7] are not entirely clear. It is possible that aspects of TFGR that Latina adolescents may find "positive" may not be viewed positively among Latina emerging adults. It is also feasible that only some dimensions of TFGR are related to alcohol use, while others are either unrelated or indirectly related through other variables. That is, collapsing across TFGR dimensions may mask important nuances of each dimension that may differentially relate to alcohol use. For example, several aspects of TFGR may be linked to distress,[20,21] which drinking alcohol may help ease. Conversely, the notion that a Latina should be "pure" may more directly relate to decreased alcohol use to the extent that drinking is inconsistent with the values of purity. Indeed, research suggests a dimension of TFGR beliefs encompassing traits such as virtue and purity (i.e., 'Virtuous and Chaste'[15]) may be inversely related to substance use among Latina adolescents.[8] The contrasting findings across studies[7,8] present evidence that only specific aspects of TFGR may be directly related to drinking behavior, and speaks to the need for more research exploring the nature of the relation between multiple dimensions of TFGR and alcohol use. Hence, the current study examined the unique relations between five TFGR dimensions and alcohol-related outcomes.

While findings from the literature support the notion that some aspects of TFGR for Latinas could be inversely related to alcohol use, it is still not clear how and why this may be. It is also important to consider that college-aged individuals are exploring their identity,[22] which may coincide with using substances such as alcohol. Thus, it is conceivable that Latina students who choose to drink but remain committed to some of the tenets of TFGR prescriptions may rely on protective behavioral strategies (PBS; described in the next section) to decrease the likelihood that they will experience negative consequences associated with heavy drinking. In doing so, a Latina may still choose to enact aspects of TFGR while navigating the college environment.

Protective behavioral strategies (PBS)

Defined as cognitive-behavioral strategies one can use before, during, and after a drinking episode to limit alcohol consumption and related consequences, PBS have been associated with reduced drinking and alcohol problems among college students.[23] The Protective Behavioral Strategies Scale (PBSS),[24] specifies three types of strategies: those that limit serious alcohol-related harms (e.g., "Use a designated driver"), those that help a person stop or limit the amount of
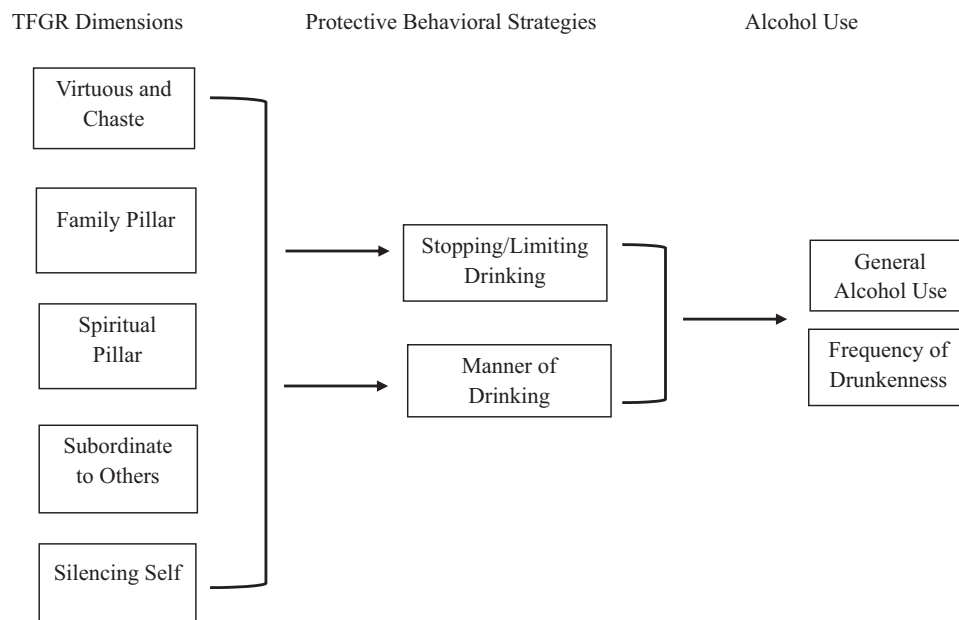
Figure 1. Conceptual model of the link between TFGR, protective behavioral strategies, and alcohol use.

alcohol they consume (e.g., "Determine not to exceed a set number of drinks"), and strategies that help one modify how they drink alcohol so as to limit consumption and associated problems (e.g., "Avoid drinking games"). Strategies to help one modify the way they drink appear to be most effective in reducing alcohol use and negative consequences.[25,26]

Research indicates college women tend to use more PBS than college men (e.g., Pearson[23]), and evidence suggests PBS is more protective for women than men,[27] though more research is needed. Although some research indicates race/ethnicity are associated with PBS use and the extent to which PBS are protective of alcohol use and negative consequences,[28,29] PBS and alcohol use among Latina college students has not been studied.

In addition to being examined in association with various drinking behaviors and alcohol-related problems, PBS have been examined as mechanisms linking various risk factors and alcohol outcomes. While PBS have not been examined as a mediator of TFGR and alcohol outcomes among Latina women, previous research indicates women may engage in other safety-related activities when drinking in order to reduce the likelihood they are viewed negatively due to evident intoxication.[30,31] Contextualized in research suggesting that values often precede behaviors, if one holds a traditional set of values, then those values would likely inform decisions that are made, such as engaging in PBS when drinking.[31] Given this along with evidence that PBS may link more distal predictors to alcohol outcomes, we hypothesize that PBS may account for a portion of the relation between TFGR and drunkenness among Latina college women.

Current study

The aim of this study was to examine the links between TFGR beliefs and general alcohol use, as well as the links between TFGR, PBS, and drunkenness among Latina college women (Figure 1). As theory and research suggest engaging in alcohol use would be counter to the enactment of some dimensions of TFGR , but perhaps not others, we posited several hypotheses. First, we expected the dimension of TFGR related to purity (i.e., 'Virtuous and Chaste') would be inversely related to both general alcohol use (i.e., frequency and quantity) and high-risk alcohol use (i.e., drunkenness among drinkers). As mentioned previously, the potential link between other dimensions of TFGR and alcohol related behaviors is not as evident, therefore the respective portion of the analysis was more exploratory. Since Latina college women may be negotiating between traditional values and those of the mainstream college environment, we posited that drinking-related aspects of TFGR may be enacted even among drinkers. Specifically, we expected that TFGR would be positively related to PBS that inhibit excessive alcohol intake (hypothesis 2), which in turn would be related to a reduced likelihood of experiencing drunkenness (hypothesis 3).

Methods

Participants and procedure

These data come from an Institutional Review Board (IRB) approved study at a southwest university examining alcohol use among 584 Latinx undergraduates (69% female). Students were recruited during the fall of 2016 through Introduction to Psychology classes to participate in a 30-minute web-based survey in fulfillment of course requirements. For this study, participants identified as female and Hispanic or Latina, were between 18-25, and unmarried. Four hundred and five Latina students met these criteria (mean age = 18.65, SD = .10; 65.9% Mexican or Mexican American).

Measures

Traditional feminine gender role (TFGR) beliefs

The *Marianismo* Beliefs Scale (MBS[15]) measured 5 dimensions of TFGR beliefs on a 7-point scale (1 = *strongly disagree*). Virtuous and Chaste contained 5 items (e.g., "A Latina should be pure," and "A Latina should remain a virgin until marriage"), Family Pillar contained 5 items (e.g., "A Latina must keep the family unified," and "A Latina must be a source of strength for her family"), Spiritual Pillar contained 3 items (e.g., "A Latina must be the spiritual leader of the family," and "A Latina is responsible for the spiritual growth of the family"), Subordinate to Others contained 5 items (e.g., "A Latina should avoid saying no to people," and "A Latina should do anything a male in the family asks her to do"), and Silencing Self contained 6 items (e.g., "A Latina should feel guilty about telling people what she needs," and "A Latina should be forgiving in all aspects"). Averages were calculated within each subscale; higher scores indicated higher endorsement of the respective dimension. The MBS was developed using a heterogeneous sample of Latina undergraduate students and demonstrated strong internal consistency within dimensions during development (α across dimensions ranging from .77 - .85).[15] Likewise, internal consistency of the TFGR dimensions for the current study was supported (Virtuous and Chaste α = .78, Family Pillar α = .82, Spiritual Pillar α = .85, Subordinate to Others α = .72, Silencing Self α = .70).

Protective behavioral strategies (PBS)

The Protective Behavioral Strategies Scale[24] measured PBS. All items were rated on a 6-point Likert scale (1 = *Never*, 6 = *Always*). Two subscales were used for this study. The first, 'Stopping/Limiting Drinking', has five items (e.g., "drink water while drinking alcohol"). The second, 'Manner of Drinking', asks participants about their engagement in high-risk drinking behaviors (e.g., "drink shots of liquor") and regulation/avoidance of high-risk behaviors (e.g., "drink slowly, rather than gulp or chug") along 7 items. Previous studies with college samples indicate both Stopping/Limiting Drinking and Manner of Drinking are internally consistent (α = .82 and .74, respectively).[24] The present study also found these scales to have good internal consistency (Stopping/Limiting Drinking α = .86; Manner of drinking α =.74).

General alcohol use

General alcohol use was measured using a modified Daily Drinking Questionnaire, Revised (DDQ-R[32]), which has been deemed a reliable and valuable assessment tool for drinking behavior among college students. Participants reported the frequency of drinking on each day of the week for the past 30 days. These scores were summed to yield a total estimate of alcohol frequency for the past month. Participants additionally estimated the average quantity of alcoholic drinks they consumed on each drinking day of the week in the past month. These scores were multiplied by the reported daily frequencies to yield a total quantity of estimated typical alcohol consumption the month. All items assessing quantity were presented with a chart depicting standardized drink portions.[33]

Drunkenness

Modeled after previous research,[34] participants reported how often during the past 30 days they drank to the point of feeling "drunk (i.e., more than just a little high, lightheaded, or 'buzzed')" using whole numbers. Given the preponderance of zeros for the present analysis, responses were dichotomized to be interpreted as never experiencing drunkenness (0) or experiencing at least one episode of drunkenness (1) during the past 30 days.

Covariates

Time since beginning college was a covariate in all models pertaining to alcohol use because research indicates that alcohol use tends to increase over the course of college.[35] Scores for time since beginning college ranged from 1 (less than 6 months) to 7 (5 or more years). We also included relationship status as a covariate in the analysis of PBS given the variable's relation to health regulatory behaviors.[36] Participants reported being 'single with no attachments' (1), 'casually dating one or more people' (2), or 'exclusively dating a single person' (3).

Data analytic approach

Data were analyzed using Mplus version 8. During preliminary analyses we examined normality, correlations, and descriptive statistics for each variable. Inattentive responses were identified using established techniques (i.e., asking participants if they were attentive during the study and if their responses should be used for data collection)[37] and were omitted during primary analyses. All analyses employed maximum likelihood estimation.

The first model tested the relation between TFGR beliefs and general alcohol use among the entire sample. As is customary with substance use data (see Atkins et al.[38]), we fit a zero-inflated model in which each general alcohol use measure was regressed onto each TFGR dimension . The zero-inflated analysis allowed us to assess how TFGR beliefs related to membership in two separate classes of zeros (i.e., structural zeros, or, *never drinkers*, and those who may drink but did not during the 30-day self-report window in the present study) using a logistic regression equation. The same model also assessed how TFGR dimensions related to the count distribution of each general alcohol use measure.[38]

A path analysis using only participants who reported past 30-day drinking assessed the relation between TFGR beliefs, PBS, and drunkenness. In this model, Stopping/Limiting Drinking and Manner of Drinking were each regressed onto each TFGR dimension . Also, drunkenness was regressed onto both PBS subscales and onto each TFGR dimension. Since the drunkenness variable was dichotomous and the

Table 1. Descriptive statistics and zero-order correlations among independent variables.

	Mean (SD) drinkers	1	2	3	4	5	6	7	8	9
1 TSBC	2.03(1.51)	–								
2 Relationship status	2.13(.92)	−.05	–							
3 Virtuous and chaste	4.29(1.32)	.05	.06	**.78**						
4 Family pillar	5.28(1.18)	−.01	.06	.57***	**.82**					
5 Spiritual pillar	3.57(1.57)	.06	.11†	.66***	.59***	**.85**				
6 Subordinate to others	2.30(1.13)	.08	.14*	.51***	.25***	.49***	**.72**			
7 Silencing self	2.42(.97)	−.01	.16*	.51***	.25***	.47***	.65***	**.70**		
8 Stopping/limiting drinking	3.84(1.21)	.02	.03	.10	.00	.02	.14*	.07	**.86**	
9 Manner of drinking	3.57(1.10)	−.00	.19**	.16*	.02	.10	.13†	.10	.60***	**.74**

Note. Data include only past 30-day drinkers (n = 222). Reliabilities in bold on diagonal. TSBC = time since beginning college. ***p<.001, **p< .01, *p<.05, †p<.10.

Table 2. The relation between TFGR and general alcohol use.

	Frequency							
	Zero-inflation				Count			
Variable	B	SE	LLCI	ULCI	B	SE	LLCI	ULCI
Virtuous and chaste	.07	.13	−.19	0.33	−.01	.08	−.16	.15
Family pillar	−.04	.14	−.31	.22	−.01	.07	−.14	.13
Spiritual pillar	−.10	.11	−.32	.13	.01	.06	−.10	.12
Subordinate to others	−.30†	.16	−.61	.00	.02	.07	−.11	.16
Silencing self	.33†	.19	−.05	.70	−.08	.09	−.25	.10
	Quantity							
	Zero-inflation				Count			
Variable	B	SE	LLCI	ULCI	B	SE	LLCI	ULCI
Virtuous and chaste	.05	.13	−.20	.31	−.23*	.10	−.42	−.03
Family pillar	−.06	.13	−.33	.20	−.02	.10	−.21	.17
Spiritual pillar	−.11	.11	−.33	.11	.06	.08	−.10	.21
Subordinate to others	−.27†	.15	−.57	.03	.03	.09	−.15	.20
Silencing self	.39*	.19	.02	.76	.03	.12	−.21	.26

Note. Loglikelihood: −1189.95, AIC: 2439.91, BIC: 2554.51; LLCI = 95% lower limit confidence interval. ULCI = 95% upper limit confidence interval. ***p< .001. **p< .01, *p< .05, †p< .10.

properties of $a*b$ cannot be generalized to endogenous variables without a continuous distribution, indirect effects were tested using a counterfactual framework, which assesses the total effect, total natural indirect effect, and pure natural direct effect.[39] However, indirect effect models in Mplus using this framework require that the model cannot include multiple mediating variables. Thus, models assessing the total natural indirect effect of each of the two PBS subscales on the relation between TFGR beliefs and drunkenness were analyzed separately.

Results

Preliminary and descriptive analyses

Descriptive statistics suggested the dimensions of TFGR beliefs and PBS were normally distributed. See Table 1 for sample means, reliabilities, and correlations between TFGR beliefs and PBS. Mean comparisons on TFGR belief subscales across drinkers and non-drinkers indicated the means were not significantly different, thus the means for drinkers are displayed for a more parsimonious presentation. The TFGR dimensions were highly correlated with each other. Data showed a positive correlation between Virtuous and Chaste and Manner of Drinking, and another positive correlation between Subordinate to Others and Stopping/Limiting drinking..

Most participants reported attending college a year or less (72%) and a GPA of 2.6 or higher (69.3%). Most reported being in an exclusive relationship (50.1%) or single with no attachments (40.7%). Also, 222 (55%) reported engaging in any episodes of drinking during the past month. Among those who reported drinking in the past month, 91 (41%) reported never experiencing drunkenness, 48 (21.6%) reported one occasion on which they experienced drunkenness, 35 (15.8%) reported two occasions, 16 (7.2%) reported three occasions, 13 (5.6%) reported four occasions, and 18 (8.1%) reported five or more occasions of drunkenness. Regarding PBS, very few current drinkers reported never using Stopping/Limiting Drinking ($n = 2$) or Manner of Drinking ($n = 5$) strategies.

Primary analyses

After accounting for inattentive responses ($n = 49$) and missing data, the analytic sample was 337 drinkers and non-drinkers (first model) and 212 drinkers (second model and subsequent test of indirect effects).

TFGR and general alcohol use (Table 2)

Both Subordinate to Others (OR = .74) and Silencing Self (OR = 1.39) were marginally related to membership in the structural zeros (*never drinkers*) of drinking frequency. None of the TFGR dimensions were related to the count portion

Table 3. TFGR, PBS, and drunkenness.

Variable	Stopping/limiting drinking ($R^2 = .03$)				Manner of drinking ($R^2 = .06^*$)				Drunkenness ($R^2 = .31^{***}$)			
	B	SE	LLCI	ULCI	B	SE	LLCI	ULCI	B	SE	LLCI	ULCI
Virtuous and chaste	.03	.09	−.07	.30	.17*	.08	.01	.34	−.41*	.19	−.78	−.03
Family pillar	−.04	.09	−.22	.14	−.11	.08	−.27	.05	.13	.18	−.21	.48
Spiritual pillar	−.07	.08	−.22	.09	.01	.07	−.13	.14	.04	.16	−.27	.35
Subordinate to others	.19†	.10	−.01	.22	.05	.09	.13	.23	.41†	.21	−.00	.81
Silencing self	−.07	.12	−.30	.16	−.05	.11	−.26	.16	.07	.23	−.38	.51
Stopping/limiting drinking	–	–	–	–	–	–	–	–	.03	.16	−.29	.35
Manner of drinking	–	–	–	–	–	–	–	–	−.96***	.20	−1.36	−.56

Note. Loglikelihood: -769.53, AIC: 1589.05, BIC: 1672.96; LLCI = 95% lower limit confidence interval. ULCI = 95% upper limit confidence interval. ***$p< .001$. **$p< .01$, *$p< .05$, †$p< .10$.

of drinking frequency, however. Similarly, when assessing drinking quantity, Subordinate to Others (OR = .76) was marginally related to a lower likelihood of being included in the structural zeros while Silencing Self (OR = 1.48) was significantly related to a greater likelihood of being included in the structural zeros. Finally, Virtuous and Chaste [exp(b) = .80] was inversely related to the count portion of drinking quantity.

Marianismo, PBS, and drunkenness (Table 3)

No dimensions of TFGR were related to Stopping/Limiting Drinking, although there was a positive association between Subordinate to Others and Stopping/Limiting Drinking that approached significance (p = .07). Only Virtuous and Chaste was related to Manner of Drinking (positively). Data further indicated that Virtuous and Chaste and Manner of Drinking were each related to a reduced likelihood of drunkenness. In addition, Subordinate to Others was marginally related to an increased likelihood of drunkenness (p = .05). Since the only significant relation to emerge betweenTFGR beliefs and PBS was for the Virtuous and Chaste and Manner of Drinking dimensions, respectively, we analyzed the indirect effect using only these two variables in relation to drunkenness. We found a significant total effect (B = -.04, SE = .02, p = .03) and total natural indirect effect (B = -.02, SE = .01, p = .02). The pure natural direct effect was not significant (B = -.02, SE = .02, p = .34), suggesting the relation between Virtuous and Chaste and drunkenness was accounted for by Manner of Drinking.

Discussion

Preliminary data indicated that the prevalence of past-30 day drinking in this sample was higher than reported drinking rates among Latinx college students from a national study.[40] Further, a higher proportion of current drinkers in this sample reported having experienced drunkenness than national samples of Latina adult women over the age of 18.[41] Overall, results from the primary analyses supported the notion that alcohol use and related behaviors may be, in part, a manifestation of specific dimensions of TFGR among Latina college women. For one, Virtuous and Chaste was negatively related to typical past month drinking quantities. Researchers have posited that, among men, drinking is an expression of masculinity.[11,12] It is possible that the converse may be true for Latinas and refraining from or limiting

alcohol use may be a way that women express aspects of a set of TGR prescriptions. Further, it is possible that women who endorse Virtuous and Chaste may prefer to not engage in drinking as it may lead to making other decisions that are incongruent with Virtuous and Chaste values (e.g., casual intimate encounters).[42] We note there were no relations between TFGR beliefs and frequency of drinking, however. It is possible that that the women in our sample may have attended social events and/or other activities that encouraged drinking, as social motivations for drinking are prevalent in college.[43] Perhaps frequency of drinking may be the expression of another role for these women (e.g., college student role), while limiting quantity of consumption may be an expression of purity aspects of TFGR.

Results from the second model indicated that, while endorsing Virtuous and Chaste may inhibit Latinas from experiencing drunkenness, endorsing Subordinate to Others may have the opposite effect, although the latter effect was marginal (p < .10). There are multiple explanations that may account for this finding. Previous research among Latina/os indicates dimensions of TFGR measured with the MBS are related to adverse cognitive emotional factors (e.g., depression, hostility[21]) and suggests a link between TFGR characterized by a desire to put others' needs and wishes before oneself and depressive symptoms among Latinas.[20] To the extent that Latinas endorse Subordinate to Others and experience distress, it is possible that drinking alcohol may be a way to cope.[44] Another potential explanation is that college women enacting this dimension of TFGR may be more susceptible to drinking-related peer influence. That is, they may be more likely to conform to the actual or perceived behavior of their peers. Research shows that college students may overestimate peer drinking-related norms,[45] and that perceived norms are strongly related to college students' own drinking behavior. For women endorsing this value, drinking alcohol when others are also drinking would not be counter to the value, as it prescribes that women place the needs of others before their own.[46]

Aligned with current research, the majority of the sample used PBS,[1] and Manner of Drinking strategies were more strongly and consistently related to decreased alcohol use than Stopping/Limiting Drinking strategies.[24,25] These data suggested Virtuous and Chaste was the only dimension of TFGR related to Manner of Drinking and no dimensions were significantly related to Stopping/Limiting Drinking at the multivariate level. An inspection of the items in each PBS subscale indicates nuances that may have implications

when considered in the context of gender performance. Although both strategies are implemented to avoid engaging in problematic alcohol use, the behaviors associated with Stopping/Limiting Drinking may not be as easily perceived by others in a social environment. However, engaging in drinking games or 'chugging' alcohol and the avoidance of such behaviors (Manner of Drinking strategies) may be more obvious behavior in a social context and therefore more obviously consistent with the Virtuous and Chaste aspects of TFGR than the less obvious Stopping/Limiting Drinking strategies of failing to drink more water or having a drink with extra ice. Importantly, the indirect effects model indicated the relation between Virtuous and Chaste and drunkenness was fully accounted for by Manner of Drinking, supporting an indirect associative nature between aspects of Latina traditional femininity and high-risk alcohol use among drinkers. These indirect findings map onto previous qualitative research. For example, scholars describe a seemingly contradictory relation between femininity and drunkenness.[30] It is suggested that high levels of intoxication among young women is understood to be somewhat normative behavior but is at the same time considered unfeminine and "trashy".[30] While drunkenness may provide an outlet to express femininity in a way that deviates from what is deemed socially acceptable,[30,47] research suggests women engage in behaviors to inhibit their level of drunkenness from being perceived negatively by others.[30] Other research indicates women perceive that intoxication may put them more at risk for being sexually victimized or experiencing other types of unwanted sexual experiences.[47,48] Given the current elevated rates of men committing sexual assaults against women in college campuses, engaging in protective practices to attempt to minimize such risk could be considered an expression of gender.[48] Although our study is the first to examine TFGR and its link to PBS and drunkenness, our findings regarding Virtuous and Chaste are aligned with theoretical perspectives of femininity, drunkenness, and safety discussed in qualitative research.

Limitations and future directions

Among the limitations present in this work, data are cross-sectional and cannot support temporal or causal conclusions. Also, we only measured drunkenness as our high-risk alcohol use variable, although previous research suggests college women may 'downplay' the language they use when describing drunkenness (e.g., using words like 'tipsy' or 'buzzed', even when highly intoxicated), in order to portray themselves as more aligned with the social norms regarding feminine drinking,[49] rendering the under-reporting of this behavior quite possible. Furthermore, research shows that the gendered patterns of drinking among Latinx populations vary as a function of country of origin.[50] Although this sample was predominantly Mexican American, future research should examine the influence of country of origin. Relatedly, research suggests overlap across racial and ethnic groups regarding their respective traditional feminine gender roles (e.g., deference among Vietnamese American women[51]),

highlighting the utility of examining if aspects of TFGR beliefs that are inversely related to drinking are unique to Latinas, or generalizable to women from other racial and ethnic groups.

A strength of the current study was the examination of each five separate dimensions with the MBS to test their respective relations to alcohol use; however, this may not reflect the bi- and multi-cultural experiences of Latinas in the U.S. A high percentage of Latina college students are first-generation students[19] and may also experience negotiating between heritage cultural socialization from their home life and U.S. college cultural socialization. Discussions in qualitative research[52,53] suggest that one strategy Latina college students may use is to adopt a dual identity, and enact specific identities depending on the context. Thus, Latinas may choose to enact gender role identities more consistent with U.S. college culture when in the college environment and enact separate gender role identities more consistent with their respective heritage cultures when around family. The concept of a dual identity, as it relates to gender roles and drinking behavior among Latinas, is understudied in the current literature and would greatly enrich future research.

In addition, future research would benefit from expanding upon the current findings with a model including motivations for drinking and college drinking climate. Studies suggest individuals are socially incentivized to drink.[54] Therefore, if a Latina college student endorses social motivations for drinking and attends a campus with a particularly high prevalence of drinking, these combined factors could (a) reduce or eliminate the extent that TFGR beliefs are inversely related toalcohol use or (b) foster the use of PBS to protect against drunkenness or other adverse consequences related to heavy drinking.

In closing, this study sheds light on the importance of considering the cultural and gender role prescribed mechanisms influencing engagement in drinking behaviors. While this study is the first to examine how multiple aspects of TFGR beliefsare directly and indirectly associated with alcohol use among Latina college students, there is considerable work left to be done. As such, we encourage scholars to build on the present work so that researchers and practitioners can gain a more nuanced understanding of the ways in which TFGR might influence drinking behaviors among Latina college students.

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Conflict of interest disclosure

The authors have no conflicts of interest to report. The authors confirm that the research presented in this article met the ethical guidelines, including adherence to the legal requirements, of the United States and received approval from the University of Texas at San Antonio.

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References

1. American College Health Association. Undergraduate student reference group. Executive summary. http://www.acha-ncha.org/docs/NCHA-II_SPRING_2017_UNDERGRADUATE_REFERENCE_GROUP_EXECUTIVE_SUMMARY.pdf
2. National Institute on Alcohol Abuse and Alcoholism. Women and alcohol. https://pubs.niaaa.nih.gov/publications/womensfact/womensFact.pdf
3. Ruthig JC, Marrone S, Hladkyj S, Robinson-Epp N. Changes in college student health: implications for academic performance. *J College Student Health.* 2011;52(3):307–320.
4. White A, Castle IP, Chen CM, Shirley M, Roach D, Hingson R. Converging patterns of alcohol use and related outcomes among females and males in the United States, 2002 to 2012. *Alcohol Clin Exp Res.* 2015;3(9):1712–1726. doi:10.1111/acer.12815.
5. Nolen-Hoeksema S. Gender differences in risk factors and consequences for alcohol use and problems. *Clin Psychol Review.* 2004;24(8):981–1010. doi:10.1016/j.cpr.2004.08.003.
6. Carranza ME. Value transmission among Salvadorian mothers and daughters: marianismo and sexual morality. *Child Adolesc Soc Work J.* 2013;30(4):311–327. doi:10.1007/s10560-012-0291-z.
7. Perrotte JK, Baumann MR, Knight CF. Traditional gender roles and the stress-alcohol relationship among Latina/o college students. *Subst Use Misuse.* 2018;53(10):1700–1705. doi:10.1080/10826084.2018.1429472.
8. Sanchez D, Vandewater EA, Hamilton ER. Examining marianismo gender role attitudes, ethnic identity, mental health, and substance use in Mexican American early adolescent girls. *J Ethn Subst Abuse.* 2017;18(2):319–342.
9. Sudhinaraset M, Wigglesworth C, Takeuchi DT. Social and cultural contexts of alcohol use: influences in a social-ecological framework. *Alcohol Res.* 2016;38(1):35–45.
10. Lee CK, Stein KF, Corte C, Steffen A. Self-schema as a nondrinker: a protective resource against heavy drinking in Mexican-American college women. *Health Promot.* 2018;33(4):676–685. doi:10.1093/heapro/dax013.
11. Courtenay WH. Construction of masculinity and their influence on men's well-being: a theory of gender and health. *Soc Sci Med.* 2000;50(10):1385–1401. doi:10.1016/S0277-9536(99)00390-1.
12. Wilkinson AL, Fleming PJ, Halpern CT, Herring AH, Harris KM. Adherence to gender-typical behavior and high-frequency substance use from adolescence into young adulthood. *Psychol of Men Masc.* 2018;19(1):145–155. doi:10.1037/men0000088.
13. Zamboanga BL, Tomaso CC, Kondo KK, Schwartz SS. Surveying the literature on acculturation and alcohol use among Hispanic college students: we're not all on the same page. *Subst Use Misuse.* 2014;49(8):1074–1078. doi:10.3109/10826084.2014.887731.
14. Stevens E. Marianismo: the other face of machismo in Latin America In: Pescatelo A. ed. *Female and Male Latin America.* Pittsburgh, PA: University of Pittsburgh Press; 1973:3–17.
15. Castillo LG, Perez FB, Castillo R, Ghosheh MR. Construction and initial validation of the Marianismo Beliefs Scale. *Couns Psychol Q.* 2010; 23(2):163–175. doi:10.1080/09515071003776036.

16. Perrotte JK, Zamboanga BL. Traditional gender roles and alcohol use among Latina/os: a review of the literature. *J Ethn Subst Abuse.* doi:10.1080/15332640.2019.1579142.
17. Soto C, Unger JB, Ritt-Olson A, Soto DW, Black DS, Baezconde-Garbanati L. Cultural values associated with substance use among Hispanic adolescents in southern California. *Subst Use Misuse.* 2011;46(10):1223–1233. doi:10.3109/10826084.2011.567366.
18. Kulis S, Marsiglia FF, Nagoshi JL. Gender roles and substance use among Mexican American adolescents: a relationship moderated by acculturation? *Subst Use Misuse.* 2012;47(3):214–229. doi:10.3109/10826084.2011.630438.
19. Piña-Watson B, Lorenzo Blanco EI, Dornhecker M, Martinez AJ, Nagoshi JL. Moving away from a cultural deficit to a holistic perspective: traditional gender role values, academic attitudes, and educational goals for Mexican descent adolescents. *J Couns Psychol.* 2016;63(3):307–318. doi:10.1037/cou0000133.
20. Albuja AF, Lara MA, Navarrete L, Nieto L. Social support and postpartum depression revisited: the traditional female role as a moderator among Mexican women. *Sex Roles.* 2017;77(3–4):209–220. doi:10.1007/s11199-016-0705-z.
21. Nuñez A, González P, Talavera GA, et al. Machismo, marianismo, and negative cognitive-emotional factors: findings from the Hispanic Community Health Study/Study of Latinos Sociocultural Ancillary Study. *J Lat Psychol.* 2016;4(4):201–217.
22. Andrews JA, Westling E. Substance use in emerging adulthood In: Arnett J, ed. *The Oxford Handbook of Emerging Adulthood.* New York, NY: Oxford University Press; 2016:521–542.
23. Pearson MR. Use of alcohol protective behavioral strategies among college students: a critical review. *Clin Psychol Rev.* 2013;33(8):1025–1040. doi:10.1016/j.cpr.2013.08.006.
24. Martens MP, Pederson ER, LaBrie JW, Ferrier AG, Cimini MD. Measuring alcohol related protective behavioral strategies among college students: further examination of the protective behavioral strategies scale. *Psychol Addict Behav.* 2007;21(3):307–315. doi:10.1037/0893-164X.21.3.307.
25. Napper LE, Kenney SR, Lac A, Lewis LJ, LaBrie JW. A cross-lagged panel model examining protective behavioral strategies: are types of strategies differentially related to alcohol use and consequences? *Addict Behav.* 2014;39(2):480–486. doi:10.1016/j.addbeh.2013.10.020.
26. Martens MP, Martin JL, Littlefield AK, Murphy JG, Cimini MD. Changes in protective behavioral strategies and alcohol use among college students. *Drug Alcohol Dep.* 2007;118(2-3):307–315.
27. Lewis MA, Rees M, Logan DE, Kaysen DL, Kilmer JR. Use of drinking protective behavioral strategies in association to sex-related alcohol negative consequences: the mediating role of alcohol consumption. *Psychol Addict Behav.* 2010;24(2):229–238. doi:10.1037/a0018361.
28. Longo LM, Martin JL, Zamboanga BL, Milroy JL, Wyrick DL. Ethnic, gender, and seasonal difference in heavy drinking and protective behavioral strategies among.student-athletes. *J Ethn Subst Abuse.* doi:10.1080/15332640.2018.1520172.
29. Martin JL, Zamboanga BL, Buckner LC, Haase R. Measurement invariance of the protective behavioral strategies scale across racial groups. *Meas Eval Couns Dev.* 2019:1–17. doi:10.1080/07481756.2019.1640615.
30. Hutton F, Griffin C, Lyons A, Niland P, McCreanor T. Tragic girls" and "crack whores": alcohol, femininity, and Facebook. *Fem and Psychol.* 2016;26(1):73–93. doi:10.1177/0959353515618224.
31. Espinoza R.The good daughter dilemma: Latinas managing family and school demands. *Journal of Hispanic High Educa.* 2010;9(4):317–330. doi:10.1177/1538192710380919.
32. Kruse MI, Corbin WR, Fromme K. Improving accuracy of quantity and frequency measures of alcohol use: disaggregating quantity and frequency. Poster presented in 28th annual meeting of the Research Society on Alcoholism; Santa Barbara, CA. June 2005.

33. National Institute on Alcohol Abuse and Alcoholism. What is a standard drink? https://www.niaaa.nih.gov/alcohol-health/overview-alcohol-consumption/what-standard-drink

34. Jackson KM, Sher KJ, Gotham HJ, Wood PK. Transitioning into and out of large-effect drinking in young adulthood. *J Abnorm Psych.* 2001;110(3):378–391. doi:10.1037/0021-843X.110.3.378.

35. Quinn PD, Fromme K. Predictors and outcomes of variability in subjective alcohol intoxication among college students: an event-level analysis across 4 years. *Alcoholism Clin Exp Res.* 2011;35(3): 484–495. doi:10.1111/j.1530-0277.2010.01365.x.

36. Craddock E, vanDellen MR, Novak SA, Ranby KW. Influence in relationships: a meta-analysis on health-related social control. *Basic Appl Soc Psych.* 2015;37(2):118–130. doi:10.1080/01973533. 2015.1011271.

37. Meade AW, Craig SB. Identifying careless responses in survey data. *Psychol Methods.* 2012;17(3):437–455. doi:10.1037/a0028085.

38. Atkins DC, Baldwin SA, Zheng C, Gallop RJ, Neighbors C. A tutorial on count regression and zero-altered count models for longitudinal substance use data. *Psychol Addict Behav.* 2013; 27(1):166–177. doi:10.1037/a0029508.

39. Muthén B, Muthén L, Asparouhov T. *Regression and Mediation Analysis Using Mplus.* Los Angeles, CA: Muthén & Muthén; 2016.

40. Center for Behavioral Health Statistics and quality, Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services and Research Triangle Institute. Results from the 2017 National Survey on Drug Use and Health: detailed tables. https://www.samhsa.gov/data/sites/default/files/cbhsq-reports/NSDUHDetailedTabs2017/NSDUHDetailedTabs2017.htm#tab6-78B. Accessed September 17, 2019.

41. Witbrodt J, Mulia N, Zemore SE, Kerr WC. Racial/ethnic disparities in alcohol-related problems: differences by gender and level of heavy drinking. *Alcohol Clin Exp Res.* 2014;38(6):1662–1670. doi:10.1111/acer.12398.

42. Barnett NP, Clerkin EM, Wood M, et al. Description and predictors of positive and negative alcohol-related consequences in the first year of college. *J Stud Alcohol Drugs.* 2014;75(1):103–114. doi:10.15288/jsad.2014.75.103.

43. LaBrie JW, Hummer JF, Pedersen ER. Reasons for drinking in the college student context: the differential role and risk of the social motivator. *J Stud Alcohol Drugs.* 2007;68(3):393–398. doi:10.15288/jsad.2007.68.393.

44. Greeley J, Oei T. Alcohol and tension reduction. In: KE Leonard, HT Blane, eds. *The Guilford Substance Abuse Series. Psychological Theories of Drinking and Alcoholism.* New York, NY: Guilford Press; 1999:14–53.

45. Merrill JE, Carey KB. Drinking over the lifespan: focus on college ages. *Alcohol Res.* 2016;38(1):103–114.

46. Neighbors C, Lee CM, Lewis MA, Fossos N, Larimer ME. Are social norms the best predictor of outcomes among heavy-drinking college students? *J Stud Alcohol Drugs.* 2007;68(4):556–565. doi:10.15288/jsad.2007.68.556.

47. Waitt G, Jessop L, Gorman-Murray A. The guys in there just expect to be laid': embodied and gendered socio-spatial practices of a 'night out' in Wollongong, Australia. *Gend Place Cult.* 2011; 18(2):255–275. doi:10.1080/0966369X.2010.551651.

48. Fileborn B. Doing gender, doing safety? Young adults' production of safety on a night out. *Gend Place Cult.* 2016;23(8): 1107–1120. doi:10.1080/0966369X.2015.1090413.

49. Levitt A, Schlauch RC, Bartholow BD, Sher KJ. Gender differences in natural language factors of subjective intoxication in college students: an experimental vignette study. *Alcohol Clin Exp Res.* 2013;37(12):2145–2151. doi:10.1111/acer.12200.

50. Cook WK, Caetano R. Ethnic drinking cultures, gender, and socioeconomic status in Asian American and Latino drinking. *Alcohol Clin Exp Res.* 2014;38(12):3043–3051. doi:10.1111/acer.12573.

51. Abrams JA, Javier SJ, Maxwell ML, Belgrave FZ, Nguyen AB. Distant but relative: similarities and differences in gender role beliefs among African American and Vietnamese American women. *Cultur Divers Ethnic Minor Psychol.* 2016;22(2):256–267. doi:10.1037/cdp0000038.

52. Redford J, Ralph J, Hoyer KM. First-generation and continuing-generation college students: a comparison of high school and postsecondary experiences. U.S. Department of Education Stats in Brief publication. https://nces.ed.gov/pubs2018/2018009.pdf. Published 2018. Accessed September 3, 2019.

53. Leyva VL. First-generation Latina graduate students: balancing professional identity development with traditional family roles. *New Directions Teach Learn.* 2011;127:21–31. doi:10.1002/tl.454.

54. Kuntsche E, Knibbe R, Gmel G, Engels R. Why do young people drink? A review of drinking motives. *Clin Psychol Rev.* 2005; 25(7):841–865. doi:10.1016/j.cpr.2005.06.002.