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## Traditional Gender Roles and Alcohol Use among Latinas/os: A Review of the Literature

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### Abstract

Research indicates alcohol use among Latina/os occurs within a gendered context. Scholars surmise this is due to traditional gender roles (TGR) of Latina/o culture, but without an analysis of the literature these assertions are unclear. Thus, this paper provides a review of the extant TGR and alcohol use literature among Latina/os. Thirteen papers met inclusion criteria. Across studies, findings were mixed, aside from those suggesting TGR comprised of hypermasculinity (i.e., traditional *machismo*) was robustly related to drinking. Tests of mediation and moderation indicated TGR and alcohol use should be assessed within a multivariate framework. Future research should address these inconsistencies through methodological refinements. In addition, we suggest the integration of existing theoretical perspectives to assist with scholarly development of in this area.

### Keywords

Hispanic; Latina/o; *machismo*; *marianismo*; alcohol

## Traditional Gender Roles and Alcohol Use among Latina/os: A Narrative Review

Over several decades, researchers have increased examinations of racial and ethnic disparities related to alcohol use (e.g., Chartier & Caetano, 2009; Zamboanga et al., 2015). This attention is partly motivated by the growing U.S. Latina/o population (U.S. Census Bureau, 2015), and more importantly, problematic trends surrounding alcohol use among Latina/os. For example, some research suggests Latina/o adolescents and young adults engage in more high-risk drinking (e.g., bingeing) than other ethnic minority groups (e.g., Johnston, O'Malley, Miech, Bachman, & Schulenberg, 2017; Kann et al., 2016). Other research finds Latina/os are more likely to report current drinking and engage in more daily heavy drinking than people in other groups (Chartier & Caetano, 2009). Finally, studies indicate Latina/os are disproportionately affected by numerous alcohol-related problems (e.g., Witbrodt, Mulia, Zemore, & Kerr, 2014).

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For decades, researchers have examined a constellation of sociocultural variables to better understand alcohol use among Latina/os. One cultural determinant of drinking behaviors among Latina/os is acculturation (Lui & Zamboanga, 2018), described as the dynamic cognitive and behavioral change experienced by immigrants and their descendants as they encounter a receiving host culture and/or people from different cultural backgrounds (see Schwartz et al., 2010). Literature suggests that U.S. acculturation is correlated with alcohol use among Latina/os, but this association differs according to gender. Specifically, research indicates orienting toward the U.S. culture is a risk factor for alcohol use for Latina women, particularly compared to Latino men (see Lui & Zamboanga, 2018). Some research even indicates orienting toward the heritage culture, or away from the U.S. culture, is related to increased alcohol use among Latinos (e.g., Perrotte, Zamboanga, Lui, & Piña-Watson, 2018; Zamboanga et al., 2006). It has been suggested that traditional Latina/o culture encourages men to engage in alcohol use while discouraging women from the same (e.g., Perrotte, Baumann, Garza, & Hale, 2017; Zamboanga, Tomaso, Kondo, & Schwartz, 2014); thus, when gender differences between acculturation and drinking behavior are found, researchers often surmise gender role norms are a factor (e.g., Perrotte et al., 2017; Schwartz et al., 2014a). While this reasoning is tenable, a narrative review of the literature will help shed light on this hypothesis. Thus, this paper aims to review and analyze the existing research on the link between TGR and alcohol use among Latina/os and offer recommendations for advancing this field of study.

### Gender Role Theory

According to gender schema theory (Bem, 1981), people are socialized through environmental influences from a young age to adopt specific sex-typed characteristics. Through social learning, what society considers 'male' and 'female' becomes embedded into one's self-concept, creating a cyclical relationship whereby behavior and self-concept reinforce the other. Therefore, when it comes to drinking attitudes and behaviors, societal cues that equate being male with consuming alcohol and cues that associate being female with drinking less (or abstaining) can become encoded into a person's gender schema.

Gender roles, then, are the enactment of this gender identity (Miville & Ferguson, 2014). From a social constructionist perspective, gender exists as a social interaction, and gendered behavior is therefore a 'performance' of gender (see Peralta, 2007; Wilkinson, Fleming, Halpern, Herring, & Harris, 2018). This framework is often applied to alcohol use through the lens of 'hegemonic masculinity,' and illustrates how drinking may be 'expression' of manhood (e.g., Lebreton, Peralta, Allen-Collinson, Wiley, & Routier, 2017). Research suggests women may refrain from high-risk drinking to not appear masculine or otherwise be looked down upon (Lebreton et al., 2017). Thus, it stands to reason that for some women, limiting or abstaining from drinking may be an expression of the feminine gender role.

Racial/ethnic minority groups members must navigate their environment according to their experience of gender along with their experience of race/ethnicity (Miville & Ferguson, 2014). As suggested by Griffith and colleagues (2012), there is much overlap between the prescribed gender roles of different groups, but each will adapt variants of these norms to best suit their respective cultures. For example, for Latinas, gender roles can be informed by

cultural values such as *respeto* (i.e., deference to authority figures within a social hierarchy) and religious symbolism (i.e., the Virgin Mary; Miville & Ferguson, 2014). Therefore, the cultural prescriptions for drinking behavior for Latinas may be different than for women from other cultures who might not incorporate these values and symbols into agender role. It is from this perspective we will examine the relationship between TGR and alcohol use among Latina/os.

### Traditional Latina/o gender roles

The male Latino gender role is often referred to as *machismo*. In the past, *machismo* has been characterized by hypermasculinity, sexual risk-taking, substance use, and dominance (Stevens, 1973). According to this perspective, *machismo* norms may encourage men to drink recklessly. Many scholars agree that this is a narrow and negative conceptualization of a complex gender role (Arciniega, Anderson, Tovar-Blank, & Tracey, 2008; Falicov, 2010; Torres, Solberg, & Carlstrom, 2002) and that Latino masculinity is better represented by multiple dimensions. For instance, in addition to the 'traditional' *machismo* characteristics just mentioned, another dimension of *machismo* encompasses attributes such as chivalry, respect, and honor (i.e., *caballerismo*; Arciniega et al., 2008). There has not been much discussion of *caballerismo* in relation to alcohol use as there is not as clear of a conceptual link for *caballerismo* as traditional *machismo*. Research shows *caballerismo* is related to both a greater sense of well-being and increased problem-solving coping (Arciniega et al., 2008), which in turn have been found to be protective against problematic drinking (Corbin, Farmer, & Nolen-Hoeksema, 2013).

Psychologists generally agree on the term *marianismo* to describe TGR for Latinas (see Castillo, Perez, Castillo, & Ghosheh, 2010). Stemming from the idyllic Virgin Mary, some characteristics of *marianismo* encourage a woman to be virginally pure, subordinate to men, and passive. Thus, a Latina conforming to this gender role may abstain from alcohol use to maintain a sense (or at least a portrayal) of purity. Concurrently, conformity to *marianismo* implies that a Latina is expected to display an almost superhuman strength, particularly when it comes to caring for the family, rendering the gender role a seemingly paradoxical cluster of dimensions (Gil & Vazquez, 1996). Each dimension places unique demands on how Latinas should conduct themselves across contexts, making it difficult to conceptually disentangle how *marianismo* may relate to alcohol. For example, drinking alcohol would be incongruent with the ideals set forth regarding purity. On the other hand, the demands placed upon Latinas may foster a sense of distress (Nuñez et al., 2015), which drinking may temporarily ease.

Qualitative studies suggest traditional *machismo* may be related to increased alcohol use for men while *marianismo* may be related to decreased alcohol use for women. Multiple studies suggest Latino men are socialized by men and women to drink, as it is traditional practice for men, and a gauge of masculinity (Fiorentino, Berger, & Ramirez, 2007; Gonzalez-Guarda, Vasquez, Urrutia, Villaruel, & Peregallo, 2011). Research on *marianismo* tends to emphasize its role in health behaviors such as sexual risk-taking rather than alcohol use, however parallels may be drawn from one behavior to another. *Marianismo* scripts are enforced from a young age as Latinas are taught to refrain from risky behaviors that are

considered impure and socially unacceptable (Carranza, 2013). Research also suggests that, as Latinas acculturate to mainstream U.S. society, maintaining values characteristic of *marianismo* becomes more difficult, and the presence of a new and relatively more “liberal” environment may explain their participation in risky behaviors (Gonzalez-Guarda et al., 2011).

## Overview

While qualitative research is useful for formulating testable hypotheses, quantitative investigations bolster meaningful theoretical conclusions. Thus, we present a narrative review of the quantitative research on TGR and alcohol among Latina/os and suggest an avenue for future research directions by bridging existing theoretical perspectives into this field of study. This review addresses the following research questions: (a) What is the breadth and depth of the extant literature on TGR and alcohol use among Latina/os? (b) What statistical relations emerge between TGR and alcohol use among Latina/os across studies? (c) How might researchers move this field forward?

For this review, TGR are considered as such when contextualized in terms of traditional *machismo*, *caballerismo*, and/or *marianismo*. Some papers use culturally general gender role measures with a Latina/o sample but draw inferences from knowledge of TGR. These will be included, and their limitations will be discussed. Alcohol use is defined to include cognitions (e.g., alcohol expectancies) and outcomes (e.g., general use, binge drinking, alcohol-related problems). Because the co-occurrence of alcohol use and other health behaviors (e.g., other substance use; Sanchez, Vandewater, & Hamilton, 2017) are outside the focus of this paper, they will not be included in our review. Inclusion criteria for this review were: (a) samples were entirely or predominantly from the U.S., (b) participants were not pre-adolescent, (c) one or more TGR was a primary variable of interest, and (d) either the sample consisted only of individuals who identify as Hispanic or Latina/o, or, findings pertaining to participants who identify as Hispanic or Latina/o were clearly specified. There were no exclusions associated with publication date. Several databases were searched [i.e., ProQuest (includes PsycARTICLES, PsycInfo, Psychology Database), Google Scholar, EBSCOhost] using combinations of the following key terms: traditional gender roles, Hispanic, Latin\*, *machismo*, *caballerismo*, *marianismo*, alcohol\*. This search yielded a total of 12 peer-reviewed papers. These 12 studies met certain key minimum quality criteria thresholds (e.g., design quality was at minimum cross-sectional; validated measures; Khan, Riet, Popay, Nixon, & Kleijnen, 2001), however we elected to refrain from excluding studies based on more stringent quality criteria. As noted in a literature review by Monk and Heim (2013), excluding studies that do not meet more stringent quality requirements (e.g., external validity) may inhibit an accurate depiction – and discussion – of the extant literature. Thus, this narrative review discusses the findings and limitations of all 12 papers found during the search. A summary of each of these papers can be found on Table 1.

## Literature Review

### Direct associations

Across studies, the most consistent patterns indicate masculinities closely aligned with traditional *machismo* are robustly related to alcohol use among Latina/os. For instance, a measure of gender identity referred to as ‘aggressive masculinity’ was related to increased prevalence of numerous alcohol-related outcomes for adolescents (Kulis et al., 2003; 2012). Similarly, other research indicated traditional *machismo* beliefs were related to general alcohol consumption use and binge drinking among Latino men (Arciniega et al., 2008; Perrotte et al., 2018). However, some studies found no link between attitudes representative of traditional *machismo* and alcohol use (e.g., Kissinger et al., 2013; Venegas et al., 2012). Other studies used *machismo* belief scales comprised of gender comparative items and found that *machismo* was linked to alcohol outcomes in women only. One of these found *machismo* beliefs were positively related to several alcohol expectancies (e.g., sexual enhancement, risk-taking) for women, but not men (Ceballos et al., 2012). The other examined *machismo* among adolescents and indicated *machismo* was protective against lifetime alcohol use for Latina girls but unrelated for boys (Soto et al., 2011), suggesting *machismo* measured this way may serve as a proxy for *marianismo*.

There is limited research on TGR and alcohol use among Latina/os exploring dimensions of masculinity other than those encompassing characteristics of traditional *machismo*. Those that do have mixed findings. One study found that a measure of gender identity labeled ‘assertive masculinity’ (e.g., goal-oriented, self-confident) was protective against alcohol use among adolescent boys (Kulis et al., 2010). Another study employed latent class analysis and found that a gender role identity labeled ‘personal masculinity’ (e.g., leader, independent) was related to lower odds of binge drinking and was predominantly comprised of women. The same study showed that the class ‘social masculinity’ (e.g., forceful, aggressive) had more men than women, and was related to higher odds of binge drinking (Vaughan et al., 2014). Three studies directly examined *caballerismo* beliefs among Latino men, with conflicting findings. Two of these failed to detect any association between *caballerismo* and either general alcohol use or binge drinking (Arciniega et al., 2008; Kissinger et al., 2013). The third, however, indicated that *caballerismo* was related to less frequent binge drinking in a Latino college sample (Perrotte et al., 2018b).

Among Latina/os, research on the link between feminine gender roles and alcohol use is less common than research on masculine gender roles, yet those that do exist also exhibit inconsistencies across studies. Interestingly, one of these studies showed that a measure of gender identity called ‘submissive femininity’—with characteristics aligned with submissive aspects of *marianismo*—was protective against alcohol use only for adolescent boys. Three studies examined the relations between dimensions of *marianismo* beliefs and alcohol use among Latinas. Two of these used the same sample and indicated a negative zero-order relation between dimensions of *marianismo* capturing deference and repression and general alcohol use (Ertl et al., 2018; Ertl, Dillon, Martin, Babino, & De La Rosa, 2017). A third study did not detect a direct association between two dimensions of *marianismo* (i.e.,

‘positive’ *marianismo*, and ‘negative’ *marianismo*) and general alcohol use or binge drinking (Perrotte et al., 2018).

In summary, although empirical trends suggest there is a link between TGR characterized by aspects of traditional *machismo* and alcohol use, the literature is largely mixed. While many of these inconsistencies may be due to discrepancies in design across studies (e.g., samples, measures used, see ‘methodological issues’), multivariate models in the reviewed studies suggest other important factors are at play. That is, some studies explored the added influence of key moderating and mediating variables in relation to TGR and alcohol use; these are described below.

### Indirect Associations and Moderators

To gain a more nuanced understanding of TGR and alcohol use, one study examined the indirect effects of internalizing behavior (e.g., crying, lethargic), externalizing behavior (e.g., aggression, skipping school), and peer substance use norms on the relation between gender identity and alcohol use (Kulis et al., 2010). For boys, assertive masculinity (dubbed a ‘positive gender role’) was negatively related to alcohol use, above and beyond internalizing and externalizing behaviors, and peer norms. For girls, both submissive femininity and aggressive masculinity (dubbed negative ‘gender roles’) were related to increased alcohol use, but these effects were diminished with the inclusion of internalizing behaviors, externalizing behaviors, and peer norms, indicating some of the relation between TGR and alcohol use is accounted for by these additional variables. Kulis and colleagues (2010) speculated the mediating effects were, in part, due to psychological distress experienced from socialization into a submissive gender role.

Demonstrating the importance of cultural context, two studies examined the moderating effect of acculturation on the relation between gender identity and alcohol use among adolescents. Aggressive masculinity was related to greater lifetime alcohol use for highly acculturated, but not less acculturated, Mexican American participants (Kulis et al., 2003). A subsequent study indicated assertive masculinity was a risk factor for binge drinking only for Latino boys who endorsed lower levels of acculturation. No interaction effects between gender identity and acculturation among the girls were found (Kulis et al., 2012).

Two studies using adult samples examined the conditional effects of other variables on the association between TGR and drinking. The first showed *machismo* was related to high-maximum drinking for Mexican American men only when self-esteem and education levels were either both low, or both high (Neff et al., 1991). The second recently found the relations between TGR and alcohol use vary depending on stress levels. Women who endorsed high levels of positive *marianismo* were more likely to drink when experiencing high levels of stress. Conversely, endorsing lower levels of positive *marianismo* was related to more binge drinking for women, but at lower levels of stress. Among men, traditional *machismo* had a stronger effect on drinking when stress levels were low. Low *caballerismo* and experiences of low stress were also associated with greater frequencies of binge drinking (Perrotte et al., 2018). Taken together, these studies provide compelling evidence that to understand the connections between well-known factors (e.g., stress, education) and alcohol use, it is beneficial to model them within a gendered, sociocultural context.



## Current Limitations and Future Directions

### Methodological Issues

The lack of a standardized measure for TGR in Latina/os likely affects the theoretical interpretation of these studies' results in numerous ways. First, some authors measured gender identity (e.g., Vaughan et al., 2014) while others measured gender role beliefs (e.g., Perrotte et al., 2018). Although a person's identities and beliefs are inter-related (Ridgeway & Correll, 2004) and likely relate to a given behavior in similar ways, they cannot be interpreted as synonymous. Thus, the gender role identity someone ascribes to and the gender role beliefs the same person possesses may not identically predict behavior. Therefore, future research should distinguish between TGR identities versus beliefs as these are not interchangeable domains of the self (as suggested by McCreary et al., 2005; Wilkinson et al., 2018) and may have nuanced associations with alcohol outcomes.

Measurement inconsistencies noted in this review also include choice of alcohol variable, which adds to the difficulty in drawing overarching conclusions across studies. Research indicates that distinct alcohol outcomes are differentially associated with variables related to acculturation (Giulamo-Ramos, Jaccard, Johansson, & Turrisi, 2004). There is an array of standardized alcohol measures available, the use of which would foster the ability for cross-study comparison. This speaks to a need to standardize alcohol measures in future studies, and also highlights the need to expand this body of literature in general so multiple studies can examine how TGR relates to many facets of alcohol use (e.g., frequency, expectancies) and a more comprehensive pattern of findings can emerge.

Furthermore, some researchers used TGR measures that were not designed to capture TGR unique to Latina/os (e.g., Vaughan et al., 2014; Venegas et al., 2012). TGR such as *caballerismo* and *marianismo* represent a unique intersection of gender and Latina/o culture likely lost in a global measure. Some research suggests that certain TGR (e.g., *machismo*) are generalizable across racial/ethnic groups (Neff, 2001). Indeed, although some research suggests Latino men may endorse higher levels of *machismo* than men from other racial/ethnic groups (Neff et al., 1991), this does not indicate measurement bias. Interestingly, in a psychometric study (Neff, 2001) of an expanded version of multi-dimensional machismo measure taken from an earlier study (see Neff et al., 1991), data indicated the underlying factor structure of the measure was not invariant across men from different racial and ethnic groups. Neff (2001) noted that the general pattern of factor loadings were remarkably similar across groups, however.

Other research suggests Latina/o gender roles are even more complex than contemporary conceptualizations. For instance, Torres et al. (2002) identified five dimensions of masculinity among a sample of Latino men. Together, these studies offer support for considering cultural nuances when examining the role of TGR in predicting behavior. Relatedly, Arciniega et al. (2008) and Castillo et al. (2010) created multi-dimensional measures to capture the complexity of TGR for Latina/os, however they are largely unused in alcohol research. Also, scholars note that traditional definitions of gender are likely being challenged – and perhaps reshaped – by newer roles within an increasingly non-traditional

context (Miville, Mendez, & Louie, 2017). Thus, moving forward, it will be important to consider how Latina/o gender roles are expanding beyond current definitions.

Another limitation of the TGR and alcohol use literature among Latina/os is each study's design. Each study used a self-report questionnaire, and all but one were cross-sectional (Kissinger et al., 2013). Since cross-sectional designs do not support temporal conclusions, the direction of the relations between TGR and alcohol use remains unknown. Longitudinal designs would lend themselves to understanding the development of and changes in TGR over time, and their role in predicting future drinking behaviors. Research on TGR and alcohol use may also benefit from the use of experimental designs. For example, a hallmark of identity is its fluidity; each person has a collection of identities and these are continually (albeit temporarily) retrieved or abandoned according to context, creating a sense of self that is flexible across situations (see Oyserman, Elmore, & Smith, 2012). Thus, experimentally priming a participant's TGR identity (e.g., Fugitt & Ham, 2018) and then measuring an alcohol outcome (e.g., drinking intention) may further our understanding of the relationship between TGR and alcohol use beyond what is currently known.

### Theoretical considerations

Although scholars assert TGR influences gendered drinking patterns among Latina/os, the extant research devoted to this study remains underdeveloped. This presents researchers with a remarkable opportunity for growth in this area. However, there is currently no unifying theoretical framework to inform future research. There is evidence in this review that the relation between TGR and alcohol use is best understood as part of a larger network of factors (e.g., Kulis et al., 2012; Perrotte et al., 2018b). In addition, the alcohol use literature supports the importance of alcohol-related cognitions (e.g., decision-making, expectancies; Furby & Beyth-Marom, 1992; Monk & Heim, 2013). Thus, the remainder of this paper will focus on recommendations for integrating existing well-established theoretical models to account for environmental and cognitive influences on drinking.

The idea that environmental norms shape human behavior is not new. Decades ago, Bronfenbrenner (1977) posited that humans develop within various environmental 'systems.' A person's immediate environment consists of family, school, work, etc. (i.e., the 'micro-system'), and the interactions occurring between the elements of this environment (i.e., the meso-system). These systems are contained within another, consisting of institutional structures, such as mass media (i.e., the exo-system), and all systems are housed in the 'macrosystem,' which provides a rubric for shaping societal structures (e.g., via educational systems). Researchers recently applied this socio-ecological framework to alcohol use (Sudhinaraset, Wigglesworth, & Takeuchi, 2016), demonstrating its usefulness as a tool for illustrating how the environment shapes drinking behavior.

An extension of this framework may provide a new perspective regarding TGR and alcohol use. Specifically, considering the socio-ecological system in conjunction with the alcohol-related decision-making process may be particularly useful. Researchers describe decision-making as a dynamic activity with five steps (see Furby & Beyth-Marom, 1992), and influenced by the salience of varying signals, preferences, and rules (see Finn, 2002). First, one must assess all potential options (e.g., to drink alcohol or not). Second, an individual



assesses the consequences that may result from each option (Furby & Beyth Marom, 1992). The second step is likely influenced by the mental representations (i.e., expectancies; Monk & Heim, 2013) one has of alcohol use. From a gendered socio-ecological perspective, these expectancies may develop via the transmission of norms throughout a person's immediate and distal environment. For example, magazines portray different alcohol consequences for each gender. Among women, drinking alcohol can be characterized as more problematic than for men, and considered 'harmful to femininity' (Atkinson et al., 2012). The third step in the decision to drink is assigning weight to the desirability of each perceived consequence (Furby & Beyth-Marom, 1992). During the second step, exposure to gender-specific environmental norms is likely responsible for many alcohol-related mental representations. For the third step, however, the extent to which he or she *values* or *identifies* with the gendered norms of either the heritage or mainstream culture may be more important. For instance, a young Latina attending a mainstream university may come from a traditional family that believes women should limit drinking. However, she may prefer to align herself with the more liberal feminine role of the mainstream environment. Here, motivational models of alcohol use (see Cooper, 1994) may be applicable. If she is motivated to drink to avoid social rejection (i.e., conformity motives; Cooper, 1994), the salient positive consequences of alcohol (i.e., 'fitting in' with peers by adopting mainstream gender role behaviors) could outweigh the salient negative consequences of alcohol (i.e., going against the *marianismo* gender role). Currently, drinking motives are not addressed in TGR and alcohol use research, although the broader gender role literature indicates a relation between various forms of gender role ideology, drinking motives, and alcohol use (e.g., Fugitt, Ham, & Bridges, 2017).

The fourth and fifth steps in the decision-making process are to determine the likelihood of each of the consequences, and glean a 'rule' from each of these steps that identifies the most optimal option (Furby & Beyth-Marom, 1992). Because the decision-making process is not static (Finne, 2002), once the decision to drink has been made, one must also decide to stop or continue drinking. Therefore, drinking (or abstaining) will reciprocally reinforce (or modify) the alcohol-related cognitions and motivations, subsequently influencing future drinking behavior and repositioning the individual within his or her own socio-ecological environment. To continue with the hypothetical scenario, should the young woman begin engaging in regular, heavy alcohol use with her university peers, her family may experience conflict over her choices. Depending on the value she places on familial relationships versus peer relationships, she may either limit future drinking to avoid further familial conflict or continue with her drinking behavior in order to maintain harmony with her peers. On the other hand, if she feels distress from the familial conflict and endorses coping motives for drinking (Cooper, 1994), she may drink to alleviate the distress. This is admittedly a somewhat simplistic example, but it nonetheless it illustrates how this process does not simply end with the decision to drink.

## Conclusions

This paper reviewed the relations between TGR and alcohol outcomes among Latina/os and provided methodological and theoretical recommendations for future research. Trends noted during this review support continuing this line of research, with emphasis on addressing key

limitations (e.g., measurement and design discrepancies) and structuring future studies within an integrated theoretical framework. While the link between TGR and alcohol use among Latina/os remains understudied, this review suggests there is merit in empirically accounting for TGR. These considerations make it even more important that researchers continually acknowledge the various expressions of Latina/o TGR as uniquely related to alcohol use. Providing adequate contextual complexity will permit more appropriate conclusions to be drawn.

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**Table 1.** Summary of empirical studies examining gender roles and alcohol use in the context of machismo and marianismo

Author(s)(year)	Design	Sample characteristics	TGR measure	Alcohol use measure
Arciniega et al. (2008)	cross-sectional (studies 1 & 2)	Study 1: 154 Mexican-origin men (mean age = 32) Study 2: 477 heterogeneous Latino men (403 Mexican-origin; mean age = 31)	Traditional Machismo and Caballerismo Scale (TMCS Arciniega et al., 2008)	Alcohol quantity
Ceballos et al. (2012)	cross-sectional	376 heterogeneous Latina/o undergraduates (290 in U.S.; 80% female; mean age = 22)	Machismo subscale of the Multiphasic Assessment of Cultural Constructs-Short Form (MACC-SF; Cuellar et al., 1995)	1 Alcohol quantity and frequency 2 Alcohol Expectancies
Erdl., et al. (2017; 2018)	cross-sectional	530 Latina recent immigrant women (18–23 years old)	Marianismo Beliefs Scale (MBS; Castillo et al., 2010).	Alcohol quantity
Kissinger, et al. (2013)	longitudinal	125 Latino immigrant men (79.7% from Honduras; mean age = 30.1)	TMCS (Arciniega et al., 2008)	Binge drinking frequency
Kulis et al. (2003)	cross-sectional	1332 multi-racial/ethnic adolescents (66% Mexican-origin; 10% other Latino/a origin) 92% age 13 or 14)	Assertive masculinity, aggressive masculinity, affective femininity, and submissive femininity (adapted from Antill et al., 1981; Marsh and Myers, 1986; Ricciardelli and Williams, 1995; Russell and Antill, 1984).	1 Lifetime alcohol use 2 Alcohol quantity 3 Age of alcohol initiation
Kulis et al. (2010)	cross-sectional	151 Latina/o adolescents, primarily Mexican-origin (most age 15 or 16)	See Kulis et al., 2003, above	1 Drinking frequency 2 Lifetime sips of alcohol 3 Binge drinking frequency 4 Alcohol quantity
Kulis et al. (2012)	cross-sectional	1466 Mexican-origin adolescents (53% female, mean age = 12.7)	See Kulis et al., 2003, above	1 Drinking frequency 2 Alcohol quantity 3 Binge drinking frequency
Neff et al. (1991)	cross-sectional	481 adult male drinkers; multi-racial/ethnic (31% Mexican-origin)	'Male role and dominance' (adapted from Abad & Suarez, 1975; Markides & Veron, 1984; Pantiz et al., 1983)	High-maximum drinking frequency
Perrotte et al. (2018b)	cross-sectional	248 Latina/o college students (69% Mexican-American)	TMCS (Arciniega et al., 2008); MBS (Castillo et al., 2010)	1 Quantity 2 Frequency of binge drinking
Soto et al. (2011)	cross-sectional	1616 heterogeneous Latina/o adolescents (mean age = 14)	<i>Machismo</i> ; 7 items on a 4-point scale (adapted from Cuellar et al., 1995)	Lifetime alcohol use
Vaughan et al. (2014)	cross-sectional	660 heterogeneous Latina/o emerging adults (mean age = 21.87)	Bem Sex Role Inventory - Short (BSRI-S; Bem, 1974)	1 Binge drinking frequency 2 Alcohol problems



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Author(s)(year)	Design	Sample characteristics	TGR measure	Alcohol use measure
Venegas et al. (2012)	cross-sectional	160 heterogeneous Latina/o college students mean age 19.9)	Hypergender Ideology Scale (Hamburger et al., 1996)	3 Typical quantity per drinking episode Heavy Episodic Drinking (Revised Daily Drinking Questionnaire; Kruse et al., 2005)