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Machismo, Marianismo, and Negative Cognitive-Emotional Factors: Findings From the Hispanic Community Health Study/ Study of Latinos Sociocultural Ancillary Study

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Abstract

There is limited research on the traditional Hispanic male and female gender roles of *machismo* and *marianismo,* respectively, in relation to negative cognitions and emotions. Given the vulnerability of Hispanics to negative cognitions and emotions, it is important to examine sociocultural correlates of emotional distress. Therefore, we examined associations of *machismo* and *marianismo* with negative cognitive-emotional factors (i.e., depression symptoms; cynical hostility; and trait anxiety and anger) in the Hispanic Community Health Study/Study of Latinos Sociocultural Ancillary Study, a cross-sectional cohort study of sociocultural and psychosocial correlates of cardiometabolic health. Participants were aged 18–74 years and self-identified as Hispanic of Central American, Cuban, Dominican, Mexican, Puerto Rican, South American, and other Hispanic background (N = 4,426). Results revealed that specific components of *machismo* (traditional machismo) and *marianismo* (family and spiritual pillar dimensions) were associated with higher levels of negative cognitions and emotions after adjusting for socio-demographic factors ($p < .05$); these associations remained consistent across sex, Hispanic background group,

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and acculturation. Findings can inform mental health interventions and contribute to our understanding of the importance of gender role socialization in the context of self-reported negative cognitive-emotional factors in Hispanics.

Keywords

gender roles; machismo; marianismo; negative cognitions/emotions

Negative cognitive-emotional factors such as depression, anxiety, anger, and cynical hostility, adversely influence cardiometabolic health (Chida & Steptoe, 2009; Low, Thurston, & Matthews, 2010; Raikkonen, Matthews, & Kuller, 2002; Watkins et al., 2013). Cardiometabolic health refers to an individual's overall risk for developing diabetes and heart disease (American Diabetes Association, 2006). Negative cognitions and emotions have been associated with risky health behaviors and are often comorbid with chronic illness, such as cardiovascular disease, diabetes, and cancer (Chapman, Perry, & Strine, 2005). Similarly, clinical emotional disorders characterized by negative affect such as depression and anxiety have been associated with significant disease burden and disability; major depressive disorders are the leading cause of disability in the United States (U.S.) for individuals aged 15 to 44 years (World Health Organization, 2008).

Recent evidence shows that Hispanics—the largest U.S. ethnic minority group (U.S. Census Bureau, 2012; Centers for Disease Control and Prevention [CDC], 2010)—are more likely to meet criteria for major depression than non-Hispanic Whites (Pratt & Brody, 2008). Research also suggests that socioeconomic and cultural factors may relate to psychological health. For instance, many Hispanics experience socioeconomic disadvantages (Brown & Patten, 2014), which could place them at greater risk for negative cognitive-emotional health problems (Gallo & Matthews, 2003; Gallo, Penedo, Espinosa de los Monteros, & Arguelles, 2009; Koster et al., 2006). Additionally, there is evidence suggesting that acculturation is related to increased negative affect experiences in Hispanics, with U.S. born or greater acculturated Hispanics exhibiting higher depression and anxiety than their foreign born or less acculturated counterparts (Familiar, Borges, Orozco, & Medina-Mora, 2011). Despite the apparent vulnerability of U.S. Hispanics to negative cognitive-emotional factors and emotional disorders, sociocultural correlates of emotional distress (e.g., gender roles) remain understudied. Therefore, it is of particular interest to examine sociocultural constructions of gender roles as they may elucidate better understanding of the cognitive-emotional experiences of Hispanics.

Gender is an important factor influencing health and well-being (Courtenay, 2000). Several studies in psychiatric epidemiology have shown that women experience nearly twice the rate of depression as men (National Institute of Mental Health [NIMH]), 2008; Wassertheil-Smoller, 2010). The same pattern holds true in Hispanics (NIMH, 2008). However, explanations for these gender differences in depression are unclear. Some researchers have stated that the lower prevalence of depression among men may be explained by gender differences in the expression of depression (Oliffe & Phillips, 2008; Winkler, Pjrek, & Kasper, 2006) and that gender socialization may play a role in the willingness to report

emotions and psychological health needs (Good & Wood, 1995; Oliffe & Phillips, 2008). Furthermore, gender socialization may be related to other negative cognitions and emotions, such as anger proneness and hostility (Copenhaver & Lash, 2000; Jakupcak, Tull, & Roemer, 2005; Kopper & Epperson, 1996). Yet, there is minimal research on the association of gender role socialization with negative cognitions and emotions, particularly among Hispanics. Thus, a key unanswered question is whether components of gender roles are associated with increased negative cognitive-emotional factors. Given the need to better understand the emotional health needs of Hispanics, research is warranted to examine cultural constructions of gender roles as correlates of negative cognitive-emotional factors among Hispanics from diverse background groups.

The sociocultural scripts of male and female gender role socialization in Hispanics cultures are referred to respectively as *machismo* and *marianismo.* The construct of *machismo* describes beliefs and expectations regarding the role of men in society; it is a set of values, attitudes, and beliefs about masculinity, or what it is to be a man. *Machismo* encompasses positive and negative aspects of masculinity, including bravery, honor, dominance, aggression, sexism, sexual prowess, and reserved emotions, among others (Mirandé, 1977; Niemann, 2004). *Machismo* also includes attitudinal beliefs that consider it appropriate for women to remain in traditional roles, and thus encourages male dominance over women. It is important to note that a small but growing body of literature (e.g., Arciniega, Anderson, Tovar-Blank, & Tracey, 2008) is moving away from the rigid depiction of machismo characterized by hypermasculity (known as *traditional machismo*) and is encompassing a positive image of male gender role characteristics, such as chivalry, bravery, and family provider attributes (known as *caballerismo*). Research also suggests that *machismo* may be influenced by socio-demographic factors, such as acculturation; that is, the endorsement of *machismo* is higher among individuals with lower U.S. acculturation (Ojeda, Rosales, & Good, 2008). In research examining gender roles in relation to negative cognitive-emotional factors, endorsement of traditional male gender role beliefs has been associated with detrimental emotional health outcomes, such as higher depression, anxiety, and anger (Fragoso & Kashubeck, 2000; Good & Wood, 1995; Kopper & Epperson, 1996; Syzdek & Addis, 2010; Wide, Mok, McKenna, & Ogrodniczuk 2011). Nonetheless, the majority of the existing literature on male gender roles has been obtained from college student and non-Hispanic White samples, and has not always considered cultural aspects of gender roles. Therefore, the association between the construct of *machismo* with negative cognitive-emotional factors in the larger Hispanic population, including women, remains unclear.

The counterpart to *machismo* is *marianismo*, which is a set of values and expectations concerning female gender roles. *Marianismo* emphasizes the role of women as family- and home-centered; it encourages passivity, self-sacrifice, and chastity (Gil & Velazquez, 1996; Niemann, 2004). A *marianista* orientation depicts women in nurturing roles and prescribes respect for patriarchal values. Historically, *marianismo* is rooted in Christian values brought to Latin America during colonization, which defined women as nurturing figures and spiritual pillars of the family; it is a construction of the expected female gender roles based on the Virgin Mary (Gil & Velazquez, 1996; Niemann, 2004). Previous studies have suggested that the cultural script of *marianismo* may be associated with health outcomes in Hispanic women (Cianelli, Ferrer, & McElmurry, 2008), including less emotional well-being

(Murguia, 2001) and increased negative emotions, particularly with regard to higher depression symptoms (Cano, 2003; Piña-Watson, Castillo, Ojeda, & Rodriguez, 2013). Despite these findings, there is limited research examining the construct of *marianismo* and most studies to date have focused on the relationship of adherence to traditional gender roles with sexual practices and abuse (e.g., Moreno, 2007). Past research has failed to examine *marianismo* in relation to multiple cognitive-emotional factors beyond depression, and it remains unclear how the multidimensional construct of *marianismo* contributes to negative cognitions and emotions in Hispanics.

In summation, *machismo* and *marianismo* are intertwined, co-existing constructs that describe socially acceptable norms and beliefs that support men and women in traditional gender roles emphasizing a patriarchal power structure. The endorsement of *machismo* ideology is not exclusive to men as women are often socialized to show respect for male authority and are expected to internalize and normalize patriarchal values. Likewise, *marianismo* is relevant to both genders as men are expected to be dominant and to engage in protective paternalism, which reinforces the *marianista* belief that women should be submissive nurturing figures in need of male protection. Although the gender roles of *machismo* and *marianismo* have been documented in research, there is a paucity of information concerning their association with emotional health indicators. It is important to understand how gender roles relate to cognitive-emotional factors, especially when considering that gender role experiences also occur cognitively, emotionally, and behaviorally (O'Neil, 2008).

Thus, given the possible relationship of gender roles with emotional health, the present study examined associations of the constructs of *machismo* and *marianismo* with negative cognitive-emotional factors (i.e., depression symptoms; cynical hostility; and trait anxiety and anger) in a Hispanic sample. We hypothesized that endorsement of more traditional *machismo* and *marianismo* beliefs would relate to higher levels of negative cognitions and emotions, and that these associations would remain after adjusting for socio-demographic characteristics (i.e., age, marital status, income, education, employment status, acculturation, and Hispanic background). We also examined if the relationships between gender roles (i.e., *machismo* and *marianismo*) and negative cognitive-emotional factors were modified by gender, acculturation, and Hispanic background group (i.e., interaction effects). Moderation analyses were conducted as an exploratory aim and thus, no a-priori directional hypotheses were derived.

Method

Participants and Sampling Procedures

Data derive from the Hispanic Community Health Study/Study of Latinos (HCHS/SOL) Sociocultural Ancillary Study (Gallo & Penedo et al., 2014). The HCHS/SOL is a population-based, prospective cohort study designed to monitor chronic disease and related risk and protective factors among Hispanics of Central American, Cuban, Dominican, Mexican, Puerto Rican, South American, and other Hispanic background (Lavange et al., 2010; Sorlie et al., 2010). A total of 16,415 Hispanics aged 18–74 years, were recruited from the Bronx, NY, Chicago, IL, Miami, FL, and San Diego, CA, using a two-stage probability

sample of household addresses. Census block groups were randomly selected in the defined field site areas with stratification based on Hispanic concentration and socio-economic status. Households were randomly selected in each sampled census block group. Eligible participants (i.e., Hispanics persons aged 18 to 74 years) were selected in each household and invited to participate. The HCHS/SOL Sociocultural Ancillary Study is a cross-sectional cohort study of sociocultural and psychosocial correlates of cardiometabolic health. The study includes a representative sub-sample of the HCHS/SOL cohort with the exception of lower participation in some higher SES strata (Gallo & Penedo et al., 2014). Participants who had completed the HCHS/SOL baseline exam were invited to participate in the HCHS/SOL Sociocultural Ancillary Study and were recruited from each of the four field sites between February 2010 and June 2011 ($N = 5,312$). Participants completed a 1–2 hour interview-administered sociocultural assessment battery. Detailed information regarding sampling design and procedures for both the HCHS/SOL Sociocultural Ancillary Study (Gallo & Penedo et al., 2014) and the parent study has been previously published (Lavange et al., 2010; Sorlie et al., 2010). For both studies, Institutional Review Board approval was obtained at each participating site and all participants provided written informed consent.

Measures

Depression—The Center for Epidemiological Studies Depression Scale (CES-D 10; Andresen, Malmgren, Carter, & Patrick, 1994) is a widely used measure to screen for depression that has been previously validated for use in Latinos (Grzywacz, Hovey, Seligman, Arcury, & Quandt, 2006). The 10-item CES-D measures depression symptoms over the past week on a 4-point scale from 0 *(rarely or none of the time 'less than a day')* to 3 *(most or all of the time '5–7 days')*. Sample items include statements such as, "I felt depressed" and "I had trouble keeping my mind on what I was doing." The range of scores on the CES-D 10 is 0 to 30, with higher scores indicating greater depression symptoms (Cronbach's alpha coefficients of internal consistency for all major study measures are reported in Table 1).

Anxiety—The Spielberger Trait Anxiety Inventory (STAI; Spielberger, Gorsuch, & Lushene, 1970) is a well-established and commonly used measure of general anxiety proneness. The current study used a shortened 10-item version of STAI. Responses are measured on a 4-point scale from 1 *(almost never)* to 4 *(almost always).* Sample items included statements such as, "I feel nervous and restless" and "I feel like a failure." Total scores ranged from 10 to 40, with higher scores indicating greater anxiety.

Anger—The Spielberger Trait Anger Scale (Spielberger, 1983) is a reliable 10-item measure of anger proneness on a 4-point scale from 1 *(almost never)* to 4 *(almost always)* that has demonstrated good psychometric properties. It consists of two subscales: *angry temperament* (i.e., tendency to experience anger in general; 4-items) and *angry reaction* (i.e., tendency to experience anger when provoked; 4-items). Sample items included statements such as, "I am a hot-headed person" and "I fly off the handle." This scale yields a total score, by summing all the items, and two subscale scores. Two items from the overall trait anger scale are not included in the subscales. Overall scale and subscales scores ranged from 10 to 40 and 4 to 16, respectively; higher scale and subscale scores indicate more anger.

Cynical Hostility—The Cook Medley Cynicism Scale (Barefoot, Dodge, Peterson, Dahlstrom, & Williams, 1989) assesses participants' negative attitudes and beliefs about others' intentions. The 13-item cynicism scale has exhibited good internal consistency in previous research and it asks respondents to rate their agreement *(true or false)* with general statements of interpersonal hostility that view others as deceitful and selfish. Sample items included statements such as, "No one cares much what happens to you" and "I think most people would like to get ahead." Total scores ranged from 0 to 13, with higher scores indicating greater cynical hostility.

Machismo Gender Role Beliefs—To assess the endorsement of *machismo beliefs*, eight items measured on a 4-point scale from 1 *(strongly disagree)* to 4 *(strongly agree)* were administered to all participants. Items stem from the MAN for Health survey (Ayala et al., 2008), which is comprised of items from existing scales that have demonstrated adequate internal consistency including the Multiphasic Assessment of Cultural Constructs-Machismo Subscale (Cuellar, Arnold, & Gonzalez, 1995; Gibbons, Wilson, & Rufener, 2006), Neff and colleagues' Male Honor and Machismo Subscales, and an item related to men's job (Neff, Prohida, & Hoppe, 1991). This scale consists of two subscales: *traditional machismo* (characterized by hypermasculinity, dominance, sexism, and emotional restrictiveness; 5-items) and *caballerismo* (characterized by bravery, honor, and chivalry; 3-items). Sample items included statements such as, "Wives should respect a man's position" and "It is important for a man to stick to his beliefs." The range of scores on the *traditional machismo* and *caballerismo* subscales are 5 to 20 and 3 to 12; higher scores on each subscale indicate greater *traditional machismo* and *caballerismo*.

Marianismo Gender Role Beliefs—*The 24-item Marianismo Beliefs Scale* (MBS; Castillo, Perez, Castillo, & Ghosheh, 2010) is a validated scale that has been used to measure the endorsement of traditional female gender role beliefs among Hispanics. It asks respondents to rate the extent to which they agree with statements regarding the female gender role values and practices ascribed to the multidimensional construct of *marianismo* on a 4-point scale ranging from 1 (*strongly disagree)* to 4 (*strongly agree)*; this scale was administered to all participants. The MBS consists of five subscales: *family pillar* (Latinas are the main source of strength for the family), *virtuous and chaste* (Latinas should be morally pure in thought and sexuality), *subordinate to others* (Latinas should show respect and obedience to men), *silencing self to maintain harmony* (Latinas should not share personal thoughts or needs in order to maintain harmony in the relationship with male partner), and *spiritual pillar* (Latinas are the spiritual leaders of the family and are responsible for the family's spiritual growth). Higher scores on each subscale indicate greater endorsement of *marianismo* beliefs.

Acculturation—The Short Acculturation Scale for Hispanics (SASH; Marin, Sabogal, Marin, Otero-Sabogal, & Perez-Stable, 1987) is a measure of acculturation that has been used in previous studies with Hispanics and has demonstrated adequate internal consistency. In the present study, 10 items assessing *language use* (i.e., SASH language use subscale) and *ethnic social relations* (i.e., SASH ethnic social relations subscale) measured on a 5-point scale were included. For items assessing *language use,* responses range from 1 *(Only*

Spanish) to *5 (Only English).* For items assessing *ethnic social relations*, responses range from 1 *(All Hispanics)* to 5 *(All Americans)*. The SASH respectively yields two average subscale scores ranging from 1 to 5, with higher scores indicating greater acculturation.

Covariates—Based on previous studies examining similar hypotheses among Hispanics (e.g., Fragoso & Kashubeck, 2000), socio-demographic covariates included age (in years), gender (male, female), education (less than high school/general education degree [GED], high school/GED only, and more than high school/GED), income (i.e., < 25,000, 25–50,000, > 50,000, and not reported), employment status (retired, not employed, employed part-time, and employed full-time), marital status (single, married or cohabitating, and separated, divorced or widow/er), language of interview (Spanish or English), years of U.S. residency (< 10 years or ≥ 10 years), Hispanic background group (Central American, Cuban, Dominican, Mexican, Puerto Rican, South American) and acculturation (language use and social ethnic relations).

Data Analyses

The HCHS/SOL cohort was selected through a stratified multi-stage area probability sample, which allowed HCHS/SOL to estimate the prevalence of diseases and risk factors in the target population (i.e., non-institutionalized Hispanic adults aged 18–74 years old residing in the four aforementioned communities). All results were weighted relative to the 2010 census to adjust for sampling probability and non-response (Lavange et al., 2010). Descriptive statistics (i.e., weighted frequencies, means, and standard errors) were calculated to describe characteristics of the target population. For all major study measures, analyses of internal consistency and confirmatory factor analyses (CFA) were conducted to evaluate the measurement properties among the entire sample and by language group (i.e., English and Spanish). Analyses of internal consistency revealed adequate reliability across most scales (see Table 1) and multigroup CFAs supported configural (i.e., factor structure equivalence) across language versions. Bivariate analyses were then conducted to examine Pearson correlations among primary study variables, specifically correlations between gender roles (i.e., *machismo* and *marianismo)* and negative cognitive-emotional factors (i.e., depression symptoms; cynical hostility; trait anxiety and anger).

Multilevel regression analyses were conducted to examine whether gender roles (i.e., *machismo* and *marianismo*) were significantly associated with negative cognitive-emotional factors after adjusting for socio-demographic characteristics (i.e., age, marital status, income, education, employment status, field site, participant sex, acculturation [language use and social ethnic relations], and Hispanic background). Another set of multilevel regression models included interaction terms to examine the socio-demographic variables of Hispanic background, acculturation, and participant sex as potential moderators where a main effect was seen for a particular relationship between gender roles and negative cognitive-emotional factors. For these models, acculturation, and gender role predictors were centered at the sample mean to increase interpretability of regression estimates and reduce collinearity of predictors. Analyses were restricted to participants with no missing data for all the variables included in the multilevel regression models (N = 4,426); participants who identified their Hispanic background as ‘other’ were coded as missing and excluded from the present study

($N = 141$). The strength of the associations were defined as significant at $p < .05$, with the exception of the interaction models, which used a more conservative alpha level of $p < .01$ to avoid making a type 1 error. No adjustments were made for multiple statistical tests performed. All analyses were conducted in IBM SPSS Statistics 20 (IBM Corp. Armonk, NY) and SAS 9.3 (SAS Institute, Cary NC) using complex designs procedures.

Results

The estimated mean age of the target population was 42.31 years. As seen in Table 2, approximately half of the target population was married or cohabitating (48.72%) and had an annual household income of less than $20,000 (46.62%). Within the target population, 54.41% were female, 44.85% were employed at least part-time, 32.27% had less than high school or GED education, 72.88% had lived in the U.S. for 10 or more years, and 75.53% preferred to complete the interview in Spanish. See Table 2 for sample characteristics overall and according to Hispanic background group.

Bivariate Analyses

Pearson correlations among main study variables are presented in Table 3. The *machismo* subscale of *traditional machismo* was significantly associated with cynical hostility ($r = .22$, $p < .001$), with higher endorsement of this gender role value being related to greater cynical hostility. As seen in Table 3, there were several significant correlations between the *marianismo* subscales and negative cognitive-emotional factors. For example, higher scores on the *family* and *spiritual pillar* subscales were positively associated with most of the negative cognitive-emotional measures (p-values < .05). The *virtuous* and *chaste* subscale was significantly correlated with cynical hostility; participants with more virtuous and chaste views also reported greater cynical hostility ($r = .12$, $p < .001$). Lastly, the *marianismo* subscales of *subordinate to others* and *silencing self to maintain harmony* were positively associated with increased depression and anxiety and greater cynical hostility ($p < .05$). In addition, Table 4 shows the correlations between traditional gender role beliefs and negative cognitive-emotional factors by sex.

Multiple Linear Regression Analyses

Tables 5 and 6 show the results of multiple linear regression analyses testing the associations of gender role beliefs (i.e., *machismo and marianismo,* respectively) with negative cognitive-emotional factors, after adjusting for socio-demographic covariates (i.e., age, marital status, income, education, employment status, gender, acculturation, and background group). Results showed that after adjusting for socio-demographic factors, higher endorsement of traditional *machismo* was associated with greater anxiety ($\beta = .12$, $p < .05$) and cynical hostility ($\beta = .21$, $p < .01$). Furthermore, higher endorsement of *caballerismo* beliefs was related to higher overall anger ($\beta = .18$, $p < .05$) and anger reaction ($\beta = .14$, $p < .01$). No other significant associations of the machismo scale with the negative cognitive-emotional factors were identified.

Analyses for *marianismo* showed that after adjusting for socio-demographic factors, scores on the *family pillar* subscale were positively associated with levels of depression symptoms

(β = .16, $p < .05$), overall trait anger (β = .16, $p < .05$), and anger reaction (β = .09, $p < .01$). Similarly, participants who scored higher on the spiritual pillar beliefs subscale reported more anxiety (β = .19, $p < .001$), overall trait anger (β = .28, $p < .001$), angry temperament (β = .12, $p < .01$), angry reaction (β = .12, $p < .01$) and cynical hostility (β = .14, $p < .01$). Spiritual pillar scores were unrelated to depression symptoms (p > .05). Higher scores on the *marianismo* subscales of *subordinate to others* and *silencing self to maintain harmony* were related to higher cynical hostility ($p < .01$; see Table 6). While the associations between the aforementioned *marianismo* subscales and negative cognitive-emotional factors were in the predicted positive directions, the *virtuous and chaste* subscale was inversely related to negative cognitions and emotions after adjusting for socio-demographic covariates ($p < .01$). Specifically, results indicated that lower endorsement of the values of virtuous and chaste were associated with increased depression (β = −.17, $p < .001$), anxiety (β = −.15, $p < .001$), overall trait anger (β = −.16, $p < .001$), and anger temperament (β = −.08, $p < .001$), after adjusting for socio-demographic covariates.

A series of models evaluated if the significant relationships between gender roles and negative cognitive-emotional factors remained consistent across participant sex, Hispanic background and acculturation. Results showed that the moderating effects of sex, Hispanic background, and acculturation were not statistically significant or meaningful (p-values > .01; data not shown). Thus, all interaction terms were dropped from the final multilevel models regressing negative cognitive-emotional factors on gender roles.

Discussion

The present study examined associations of the gender role constructs of *machismo* and *marianismo* with negative cognitive-emotional factors (i.e., depression symptoms; trait anxiety and anger; cynical hostility) among Hispanics in the HCHS/SOL Sociocultural Ancillary Study. Prior research suggests that culture influences an array of behaviors and psychological experiences by imposing gender role values and expectations for both men and women (Courtenay, 2000). In Hispanic cultures, traditional gender role norms are respectively known as *machismo* and *marianismo* (Niemann, 2004). In the present study, we found that specific components of traditional gender roles were significantly associated with various negative cognitive-emotional factors after adjusting for socio-demographic covariates, which contributes to our understanding of the importance of gender role socialization in the context of Hispanics' psychological health indicators. These findings are particularly important when considering that negative cognitive-emotional factors have implications for overall physical and emotional health (Chapman et al., 2005).

Moreover, consistent with earlier research (Arciniega et al., 2008; Castillo et al., 2010), this study provides support that *machismo* and *marianismo* are multidimensional constructs and particular dimensions of these constructs can relate to negative cognitive-emotional factors differentially. Traditional aspects of *machismo* pertaining to dominance, sexism, and emotional restrictiveness were associated with anxiety, and in particular with cynical hostility, which is characterized by interpersonal hostility and cynical mistrust of others. This finding is important when considering that cynical hostility has been suggested to adversely influence cardiovascular health (Everson-Rose & Lewis, 2005; Shen, Countryman,

Spiro, & Niaura, 2008). Interestingly, *caballerismo,* which emphasizes honor and bravery, was related to a higher tendency to experience anger when provoked (i.e., anger reaction). Although additional research in this area is needed, a possible explanation for such finding is that *caballerismo* is rooted in the historical notion of knighthood which values chivalry and thus, *caballeros* may experience anger to a perceived provocation in the name of defending honor.

It is also important to note that there is not a consistent measure of *machismo* among the few existing studies examining gender roles in Hispanic samples, which limits the generalizability and interpretability of findings across studies. Subsequent studies are needed to further examine the meaning and measurement of the male gender role construct of *machismo* beyond its often monolithic depiction (often viewed as hypermasculinity composed of negative attributes). This study provides evidence for the bidimensional nature of *machismo* (i.e., encompasses both negative and more positive *caballerismo* attributes) that expands the oversimplified conception of *machismo* (Arciniega et al., 2008). Additional studies are needed to examine *machismo* as a multidimensional construct, similar to the conceptualization of *marianismo* (see Castillo et al., 2010).

Study findings show that the multidimensional construct of *marianismo* is associated with increased negative cognitive-emotional factors. The few studies on *marianismo* and negative cognitive-emotional factors are consistent with current study findings (Cano, 2003; Piña-Watson et al., 2013). These earlier studies indicate that *marianismo* is related to increased negative affect and less psychological well-being (Murguia, 2001). To our knowledge, no prior study has examined the association of *marianismo* with cynical hostility. Additionally, it is noteworthy that the present study revealed specific components of *marianismo* that were related to the different negative cognitive-emotional factors. Among all the *marianismo* subscales, the *family* and *spiritual pillar* subscales are most consistently associated with higher levels of negative cognitions and emotions. Thus, findings suggest that the demanding *marianista* expectations that a woman serve as the main source of strength for her family and that she be responsible for the family's well-being and spiritual growth, may contribute to psychological burden in Hispanics. Furthermore, *subordinate to others* characterized by the expectation that women should show obedience to patriarchal power structures [e.g., respecting men's opinion regardless of a woman's personal opinion (Castillo et al., 2010)] and *silencing self to maintain harmony* by not expressing needs and being forgiving in all aspects were both found to be associated with a greater tendency to have a negative view of others, such as cynicism and mistrust (i.e., cynical hostility). Lastly, lower endorsement of traditional gender roles beliefs suggesting that women should be pure in sexuality and abide to high moral standards (i.e., *virtuous and chaste*) was associated with increased negative cognitions and emotions. Most cultures, including Hispanics, have societal norms concerning sexual morality. In traditional Hispanic cultures, both being sexually virtuous and having sexual moral principles are considered to be positive attributes. Therefore, individuals with non-traditional views on virtuous and chaste values may experience increased negative cognitive-emotional factors because their beliefs are not congruent with traditional society in terms of sexual morality.

When testing for the moderating effects of sex, Hispanic background, and acculturation on the associations between gender roles with negative cognitive-emotional factors, results revealed no significant interactions; thus, results do not support the hypothesis that associations might differ by sex or acculturation. Likewise, non-significant results were found when examining the exploratory aim testing the moderating effects of Hispanic background group on the relationships between gender roles and negative cognitive-emotional factors. Therefore, findings suggest that endorsement of traditional gender roles relate to worse psychological health across a diverse sample of Hispanics, regardless of sex, level of acculturation to U.S. mainstream society, and Hispanic background group. In order to better serve the rapidly growing population of U.S. Hispanics, it is important to consider sociocultural constructions of gender roles as they influence people's interactions, cognitions, and emotions (Rodriguez, 2004). Although the effect sizes of the associations between gender roles and negative cognitive-emotional factors were small ($r < .30$; see Cohen, 1992), the present study is notable because it expands the small body of literature on cultural gender roles and self-reported levels of negative cognitions and emotions in Hispanics. This study's findings are valuable when considering that gender norms form part of the expected roles of men and women in traditional Hispanic cultures (Arredondo, Gallardo-Cooper, Delgado-Romero, & Zapata, 2013). The current findings are not intended to perpetuate stereotypes among the studied population; on the other hand, findings shed light in regard to the fact that rigid constructions of gender roles imposed by society may relate to increased symptoms of negative cognitive-emotional factors. Given these findings and the vulnerability of Hispanics to negative cognitive-emotional factors, future research could seek to identify healthy gender role conceptualizations that may lessen the emotional burden associated with meeting the gender role demands of *machismo* and *marianismo* among this population.

Study Limitations and Implications for Future Research and Practice

There are some limitations that need to be considered when interpreting these results. The cross-sectional study design impedes establishing directional or causal relationships between the gender role constructs of *machismo* and *marianismo* with negative cognitive-emotional factors. It remains unknown if the associations found in this study would remain consistent across Hispanic samples with different sociocultural and socio-demographic characteristics (e.g., other Hispanic origin or SES characteristics). The *machismo* subscale measuring *traditional machismo* had the weakest validity ($\alpha_{overall} = .60$), which limits interpretability and generalizability of present findings across studies. Another limitation is that this study relied on self-report measures; therefore, results could in part reflect common method variance or participants' response biases. Additionally, social desirability could have played a role in participants' disclosure of their endorsement of traditional gender role beliefs; that is, participants could have responded in a way that they considered to be consistent with societal expectations of gender roles.

Despite its limitations, to our knowledge, the present study is the first to empirically examine the associations between the gender role conceptualizations of *machismo* and *marianismo* with negative cognitive-emotional factors across a large sample of Hispanics of diverse background groups. This study has valuable implications for counselors and service

providers as it informs the endorsement of traditional gender roles that may contribute to higher levels of negative cognitions and emotions in Hispanics. Findings provide detailed information about specific components of traditional gender roles, particularly *marianismo*, which may be relevant when working with Hispanics in therapy and in preventive efforts that discuss the burden of gender role obligations (e.g., high family responsibilities) in the context of negative affect experiences. Moreover, understanding the role of gender norms ascribed to *machismo* and *marianismo* may help counselors to better address symptoms of negative cognitions and emotions by providing culturally responsive services that include positive and empowering aspects of gender roles. Psychoeducation promoting constructive conceptualizations of gender roles across men and women could decrease rigid dimensions of traditional gender roles (e.g., sexism, patriarchalism), which could help reduce the vulnerability of Hispanics to negative cognitions and emotions. Future research should consider the importance of addressing sociocultural constructions of gender roles in relation to cognitive-emotional factors as a positive state of mind supports healthy interpersonal relationships, well-being, and physical health.

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Table 1

Cronbach's Alpha Internal Consistency Coefficients for Major Study Measures among the Entire Sample and by Language Group

Scale	Overall α	English α	Spanish α
Acculturation subscales			
Language use	.93	.79	.85
Ethnic social relations	.72	.68	.69
Machismo subscales			
Traditional machismo	.60	.56	.59
Caballerismo	.72	.69	.73
Marianismo subscales			
Family pillar	.78	.78	.79
Virtual and chaste	.80	.78	.81
Subordinate to others	.79	.75	.80
Silencing self to maintain harmony	.82	.83	.82
Spiritual pillar	.79	.80	.79
Negative-cognitive emotional factors			
Depression	.83	.84	.83
Anxiety	.76	.82	.75
Anger	.86	.87	.85
Anger temperament	.84	.88	.83
Anger reaction	.73	.73	.73
Cynical hostility[1]	.80	.76	.81

Note.

[1]Kuder-Richardson 20 coefficient of internal consistency was reported.

All scales were administered in the HCHS/SOL Sociocultural Ancillary Study.

Table 2

Sample Characteristics of the Target Population

	Overall (*N* = 4,426)	Central American (*n* = 448)	Cubans (*n* = 596)	Dominicans (*n* = 484)	Mexican American (*n* = 1843)	Puerto Rican (*n* = 768)	South American (*n* = 287)
Women	54.41 (1.09)	54.67 (2.70)	49.70 (1.88)	60.69 (3.29)	55.54 (1.73)	52.29 (2.60)	54.11 (3.95)
Age[2]	42.31 (0.38)	39.69 (0.90)	47.85 (0.81)	40.07 (1.15)	39.38 (0.58)	45.16 (0.92)	45.15 (1.08)
Married or Cohabitating[1]	48.94 (1.32)	43.89 (3.11)	47.75 (2.25)	39.96 (3.55)	59.40 (1.97)	31.00 (2.53)	59.12 (3.62)
Education[1]							
< High school/GED	32.27 (1.23)	35.13 (3.32)	24.86 (2.00)	38.46 (3.24)	33.88 (2.17)	33.06 (3.18)	24.54 (3.52)
High school only	27.99 (0.95)	23.60 (2.77)	30.79 (2.34)	25.25 (3.70)	28.60 (1.62)	27.87 (2.54)	26.41 (3.23)
> High school/GED	39.75 (1.37)	41.27 (3.43)	44.35 (2.25)	36.29 (3.26)	37.52 (2.27)	39.07 (3.29)	49.06 (3.59)
Income[1]							
$ < 20,000	46.62 (1.36)	52.41 (3.24)	57.91 (2.41)	51.60 (3.82)	36.89 (1.98)	51.83 (3.08)	47.93 (3.19)
$ 21–50,000	35.43 (1.23)	30.99 (2.85)	23.27 (1.92)	33.58 (3.53)	44.35 (1.76)	29.75 (2.97)	39.57 (3.77)
$ > 50,000	10.04 (1.09)	6.77 (1.65)	4.69 (1.37)	4.00 (1.22)	14.91 (2.08)	10.74 (1.57)	8.59 (2.75)
Not reported	7.92 (0.59)	9.83 (1.66)	14.13 (1.63)	10.81 (1.98)	4.35 (0.63)	7.69 (1.37)	3.92 (1.48)
Employment[1]							
Retired	9.10 (0.77)	5.72 (1.32)	13.00 (1.95)	6.60 (1.32)	4.63 (0.86)	19.11 (2.84)	8.42 (1.98)
Not employed	46.09 (1.31)	40.69 (3.16)	54.56 (2.41)	47.38 (3.43)	44.60(1.92)	44.75 (3.20)	35.53 (3.77)
Employed part-time	18.24 (0.86)	23.94 (2.39)	12.62 (1.40)	18.60 (2.44)	20.94 (1.41)	12.87 (1.85)	25.93 (3.19)
Employed full-time	26.58 (0.97)	29.65 (2.45)	19.82 (1.64)	27.42 (3.03)	29.83 (1.69)	23.27 (2.22)	30.13 (3.58)
U.S. residence > 10 years[1]	72.88 (1.47)	63.43 (3.54)	50.66 (3.08)	71.91 (3.32)	79.03 (1.69)	92.24 (1.72)	59.07 (4.38)
Spanish language preference[1]	75.53 (1.38)	88.66 (2.85)	91.49 (1.74)	75.96 (4.45)	78.10 (2.01)	40.53 (3.07)	90.39 (2.44)
Acculturation[2]							
Language use	2.09 (0.04)	1.76 (0.08)	1.54 (0.05)	1.93 (0.10)	2.09 (0.05)	3.10 (0.06)	1.77 (0.07)
Social ethnic relations	2.24 (0.02)	2.11 (0.04)	1.99 (0.03)	2.31 (0.04)	2.24 (0.2)	2.54 (0.04)	2.22 (0.04)
Machismo[2]							
Traditional machismo	12.19(0.07)	12.92 (0.14)	12.89 (0.13)	12.62 (0.26)	11.73 (0.08)	11.93 (0.11)	12.03 (0.18)
Caballerismo	9.70 (0.03)	9.61 (0.11)	10.03 (0.06)	9.71 (0.10)	9.57 (0.04)	9.71 (0.07)	9.52 (0.14)
Marianismo[2]							

	Overall (*N* = 4,426)	Central American (*n* = 448)	Cubans (*n* = 596)	Dominicans (*n* = 484)	Mexican American (*n* = 1843)	Puerto Rican (*n* = 768)	South American (*n* = 287)
Family pillar	16.02(0.05)	16.16 (0.13)	16.31 (0.10)	16.56 (0.16)	15.67 (0.06)	16.09 (0.13)	16.01 (0.19)
Virtuous and chaste	13.97 (0.07)	14.24 (0.14)	14.26 (0.15)	14.27 (0.18)	13.66 (0.09)	14.10 (0.12)	13.83 (0.23)
Subordinate to others	10.35 (0.07)	10.79 (0.13)	10.93 (0.11)	10.16 (0.16)	10.00 (0.13)	10.59 (0.12)	10.23(0.20)
Silencing self to maintain harmony	11.59 (0.08)	12.24 (0.18)	11.93 (0.12)	11.42 (.21)	11.35 (.13)	11.60 (0.12)	11.65 (0.24)
Spiritual pillar	8.09 (0.04)	8.56 (0.09)	8.17 (0.08)	8.44 (0.12)	7.88 (0.07)	8.00 (0.08)	8.21 (0.13)
Negative cognitive- emotional factors[2]							
Depression	7.77 (0.14)	7.94 (0.46)	8.24 (0.29)	7.73 (0.47)	7.15 (0.19)	9.02 (0.34)	6.65 (0.34)
Anxiety	17.73 (0.11)	17.62 (0.34)	18.11 (0.21)	17.87 (0.40)	17.33 (0.19)	18.40 (0.34)	16.97 (0.35)
Anger	17.06 (0.13)	17.43 (0.37)	17.06 (0.21)	16.58 (0.44)	17.02 (0.23)	17.96 (0.33)	16.32 (0.33)
Temperament	6.24 (0.06)	6.46 (0.17)	5.89 (0.12)	6.07 (0.23)	6.31 (0.11)	6.58 (0.15)	5.88 (0.13)
Reaction	7.88 (0.06)	7.95 (0.16)	8.43 (0.12)	7.64 (0.18)	7.73 (0.10)	7.84 (0.15)	7.68 (0.19)
Cynical hostility	8.17 (0.08)	8.55 (0.24)	8.38 (0.18)	8.92 (0.16)	7.61 (0.14)	8.55 (0.19)	8.26 (0.24)

Note. Values (except for sample sizes) are weighted for sample design and nonresponse to Census 2010 U.S. population.

[1]% (Standard Error of %);

[2]*M* (Standard Error).

For all scales, higher scores indicate greater endorsement of the construct assessed.

Table 3

Intercorrelations among Major Study Variables for the Entire Sample

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Traditional machismo	-															
2. Caballerismo	.22***	-														
3. Family pillar	.19***	.42***	-													
4. Virtuous and chaste	.42***	.28***	.35***	-												
5. Subordinate	.52***	−.01	.04	.39***	-											
6. Self-silencing	.46***	−.11***	−.07**	.29***	.74***	-										
7. Spiritual pillar	.31***	.13***	.34***	.38***	.32***	.30***	-									
8. Depression	.03	−.02	.05**	−.02	.06**	.06*	.05**	-								
9. Anxiety	.05*	−.02	.06**	.00	.10***	.10***	.10***	.70***	-							
10. Anger	−.01	.05*	.07**	−.03*	.02	−.01	.06**	.42***	.50***	-						
11. Anger temperament	−.03	.01	.03	−.04*	.01	.00	.05*	.40***	.46***	.86***	-					
12. Anger reaction	.02	.09***	.08***	.01	.03	.00	.06**	.32***	.39***	.85***	.50***	-				
13. Cynical hostility	.22***	.04*	.09***	.12***	.23***	.22***	.16***	.26***	.30***	.31***	.23***	.30***	-			
14. Lang. use	−.25**	.05	−.07*	−.09***	−.16***	−.18***	−.16***	.06*	.04	.11***	.12***	.05*	−.01	-		
15. Social ethnic relations	−.20***	.00	−.04*	−.10***	−.13***	−.15***	−.10***	.01	.05	−.01	.00	−.05*	−.06*	.53***	-	
16. Sex (0 = F; 1 = M)	.20***	.14**	−.09***	.05*	.19***	.14***	−.09***	−.10***	−.11***	−.01	−.06**	.05***	.10***	.15***	.09***	-

Note. Abbreviations: Subordinate = Subordinate to others; Self silencing = Silencing self to maintain harmony; Lang. use = Language use acculturation. Social ethnic relations = Social ethnic relations acculturation. F = Female; M = Male.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 4

Correlations between Traditional Gender Role Beliefs and Negative Cognitive-Emotional Factors by Sex

	Traditional Gender Role Beliefs	Depression	Anxiety	Anger	Anger Temperament	Anger Reaction	Cynical Hostility
Females	*Machismo:*						
	Traditional machismo	.06	.09**	−.08	−.07	−.05	.23***
	Caballerismo	.00	.02	.06*	.03	.09	.03
	Marianismo:						
	Family pillar	.05*	.06*	.07**	.04	.10***	.08***
	Virtuous and chaste	−.02	.01	−.07	−07*	−.02	.14***
	Subordinate to others	.07*	.11***	−.03	−.03	−.02	.24***
	Silencing to maintain self	.06*	.09***	−.06	−.06	−.06	.23***
	Spiritual pillar	.05	.08***	.03	.03	.06	.20***
Males	*Machismo:*						
	Traditional machismo	.05	.06*	.08*	.06	.08	.18***
	Caballerismo	−.01	−.06	.05*	.01	.08***	.03*
	Marianismo:						
	Family pillar	.03	.03	.06**	.01	.07***	.12***
	Virtuous and chaste	.00	.01	.03	.00	.06	.08***
	Subordinate to others	09**	.15***	.10	.09	.07	.18***
	Silencing to maintain self	.10*	.17***	.08	.08	.06	.18***
	Spiritual pillar	.05	.11***	.09**	.09*	.07**	.15***

Note.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 5

Summary of Multiple Regression Analyses Regressing Negative Cognitive-Emotional Factors on Machismo Gender Role Beliefs

		Depression			Anxiety			Anger		
Predictor		**β**	**SE**	**Δ R^2**	**β**	**SE**	**Δ R^2**	**β**	**SE**	**Δ R^2**
Model 1	Control variables			7.16%			9.05%			5.96%
Model 2	*Machismo:*			0.09%			0.24%			0.21%
	Traditional machismo	.08	.07		.12*	.06		.01	.06	
	Caballerismo	−.06	.09		−.09	.09		.18*	.09	
Total R^2				7.25%			9.29%			6.17%

		Anger Temperament			Anger Reaction			Cynical Hostility		
Predictor		**β**	**SE**	**Δ R^2**	**β**	**SE**	**Δ R^2**	**β**	**SE**	**Δ R^2**
Model 1	Control variables			6.05%			4.32%			8.85%
Model 2	*Machismo:*			0.04%			0.48%			1.95%
	Traditional machismo	.00	.03		.00	.03		.21**	.03	
	Caballerismo	.04	.04		.14**	.05		.01	.05	
Total R^2				6.09%			4.80%			10.80%

Note. Control variables included age, marital status, income, education, employment status, gender, language use acculturation, social ethnic relations acculturation, field site, and Hispanic background group. Model 2 adjusted for Model 1 control variables plus *machismo* gender roles subscales. All subscales were entered simultaneously.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Table 6

Summary of Multiple Regression Analyses Regressing Negative Cognitive-Emotional Factors on Marianismo Gender Role Beliefs

		Depression			Anxiety			Anger		
Predictor		**β**	**SE**	**Δ R^2**	**β**	**SE**	**Δ R^2**	**β**	**SE**	**Δ R^2**
Model 1	Control variables			7.16%			9.05%			5.96%
Model 2	*Marianismo:*			0.65%			1.36%			1.35%
	Family pillar	.16*	.07		.09	.05		.16*	.06	
	Virtuous and chaste	−.17***	.05		−.15***	.04		−.16***	.05	
	Subordinate to others	.09	.07		.13	.07		.12	.08	
	Self-silencing	.07	.06		.08	.06		−.06	.06	
	Spiritual pillar	.02	.08		.19***	.07		.28***	08	
Total R^2				7.81%			10.41%			7.31%

		Anger Temperament			Anger Reaction			Cynical Hostility		
Predictor		**β**	**SE**	**Δ R^2**	**β**	**SE**	**Δ R^2**	**β**	**SE**	**Δ R^2**
Model 1	Control variables			6.05%			4.32%			8.85%
Model 2	*Marianismo:*			0.97%			1.14%			3.15%
	Family pillar	.04	.03		.09**	.03		.09**	.03	
	Virtuous and chaste	−.08***	.02		−.04	.03		−.03	.03	
	Subordinate to others	.05	.03		.04	.04		.12***	.04	
	Self-silencing	−.01	.03		−.03	.03		.09**	.03	
	Spiritual pillar	.12**	.04		.12**	.04		.14**	.05	
Total R^2				7.02%			5.46%			12.00%

Note. Control variables included age, marital status, income, education, employment status, gender, language use acculturation, social ethnic relations acculturation, field site, and Hispanic background group. Model 2 adjusted for Model 1 control variables plus *marianismo* gender roles subscales. All subscales were entered simultaneously.

* $p < .05$.

** $p < .01$.

*** $p < .001$.