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Gender Roles, Externalizing Behaviors, and Substance Use Among Mexican-American Adolescents

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Abstract

A sample of 60 male and 91 female Mexican-American adolescents (age 13–18) were administered measures of positive (i.e., assertive masculinity, affective femininity) and negative (i.e., aggressive masculinity, submissive femininity) gender roles, internalizing and externalizing problem behaviors, peer substance use, and own substance use (alcohol, cigarettes, marijuana). Negative gender roles were significantly correlated with internalizing and externalizing problems for both boys and girls, with aggressive masculinity also predicting peer substance use for both genders. Assertive masculinity significantly predicted lower alcohol use in boys, and this effect was not mediated by internalizing problems, externalizing problems, or peer substance use. Negative gender roles significantly predicted higher alcohol use in girls, but this effect was almost completely mediated by internalizing problems, externalizing problems, and peer substance use. Results are discussed in terms of gender role socialization among Mexican Americans.

Keywords

externalizing/internalizing; gender roles; Mexican-American adolescents; substance use

In the general adolescent population, cigarette smoking, alcohol, and illicit drug use tends to increase and peak for males as they approach young adulthood at 18 to 25 years old (Park, Muyle, Adams, Brindis, & Irwin, 2006). Mexican-American adolescent males could be particularly vulnerable. Since 1992 Latinos have reported the highest annual rates of illicit drug use among eighth-grade students in national studies, as well as higher rates of recent alcohol use, intoxication, and binge drinking than students from other ethnic groups (Johnston, O'Malley, Bachman, & Schulenberg, 2004). As reviewed by Alvarez, Jason, Olson, Ferrari, and Davis (2007), Latina women are more likely to abstain from using substances and are less likely than Latino men to drink heavily and become alcohol dependent. The higher prevalence of substance use among Mexican-American adolescents translates into higher risk for substance abuse, substance dependence, mental disorders, and serious mental illness as these teens enter young adulthood. Gender roles are possible factors that could be implicated in all

these vulnerabilities. Through their relationship to internalizing and externalizing problem behaviors (Achenbach & Rescorla, 2001), gender roles might be important in predicting adolescent alcohol and drug use.

Research has shown that adolescent internalizing and externalizing problem behaviors can in fact be accounted for by gender differences in traditionally defined gender roles of masculinity and femininity (Hoffmann, Powlishta, & White, 2004; Huselid & Cooper, 1994). This article reports the results of analyses extending these findings to a conceptualization of masculinity and femininity that differentiates between functional and maladaptive aspects of traditional gender roles in a sample of Mexican-American adolescents. These gender roles have been associated with internalizing and externalizing problem behaviors. In turn, alcohol and other drug use are considered as outcome variables related to internalizing and externalizing problem behaviors. Figure 1 displays the conceptual model that guides the study.

GENDER, GENDER ROLES, AND INSTRUMENTALITY/EXPRESSIVITY

Gender is a system of classification that describes characteristics and behaviors that are generally ascribed to certain bodies, most often in a dual manner distinguishing male and female. Society then attributes those characteristics and behaviors as representing masculine or feminine orientations (Green, 2004). Gender roles are the stereotypical emotions, cognitions, and behaviors associated with being male or female and are presumably acquired through socialization (social learning, modeling, etc.). For males, traditional gender roles typically promote being active, aggressive, and expressive of anger, but without displaying sadness (Block, 1983). These traditional male gender roles have been coined “masculine” or “instrumental” (attainment of goals external to the social interaction process; Gill, Stockard, Johnson, & Williams, 1987) behaviors. In turn, traditional gender roles promote women to be passive, compliant, and expressive of sadness without showing anger (Block, 1983). These traditional female gender roles have been coined “feminine” or “expressive” (primacy of facilitating the social interaction process; Gill et al., 1987) behaviors. Adolescents tend to express characteristics that fall within these accepted gender roles, thus adolescent males adopt more masculine attributes or instrumental gender roles and adolescent females adopt more feminine or expressive gender roles (Spence & Helmreich, 1980).

Spence’s functional model suggests that gender role socialization influences an individual’s vulnerability to both stress and distress, and consequently the amount of distress experienced. This gender role functionality model argues that personality attributes are adaptive through either instrumentality or expressivity, which is then inversely related to pathology (Spence, 1984). For example, highly instrumental individuals are less likely to see events as being threatening and are more likely to effectively cope with stressful situations that arise (Nezu & Nezu, 1987; Towbes, Cohen, & Glyshaw, 1989). Highly expressive individuals are also less likely to have pathological problems, due to their effective interpersonal skills and high levels of social support (Steenbarger & Greenberg, 1990; Wells, 1980). On the other hand, gender roles might predict maladaptive psychological functioning among adolescents through internalizing (depression, anxiety, social withdrawal) or externalizing (impulsivity, sensation seeking, antisociality) problem behaviors (Oldehinkel, Hartman, Winter, Veenstra, & Ormel, 2004).

GENDER, GENDER ROLES, AND INTERNALIZING/EXTERNALIZING PROBLEM BEHAVIORS

To clarify the relationships between gender roles and internalizing and externalizing problem behaviors, some researchers (Marsh & Myers, 1986; Ricciardelli & Williams, 1995; Russell & Antill, 1984) have proposed differentiating between the adaptive and maladaptive aspects

of masculinity and femininity by distinguishing between socially desirable and undesirable masculine and feminine traits. Aggressive (negative) masculinity is characterized by controlling and dominance, whereas assertive (positive) masculinity is characterized by self-confidence, competence, and leadership. Submissive (negative) femininity is characterized by inadequacy and dependence, and affective (positive) femininity is characterized by emotional expressiveness, empathy, nurturance, and sense of communion. Another way of understanding this is that the negative aspects of masculinity represent the extremes of instrumentality, where assertiveness becomes aggressiveness, whereas the negative aspects of femininity represent the extremes of expressivity, where sensitivity to interpersonal relationships becomes emotional overreactivity and social submissiveness. This might explain some of the seemingly contradictory findings discussed later, where gender roles seem to predict both adaptive and maladaptive psychological functioning.

Instrumentality has been shown to be inversely correlated with internalizing problem behaviors (Sanfilippo, 1994) and directly related to externalizing problem behaviors in adolescent boys (Huselid & Cooper, 1994; Payne, 1987). Adolescent males manifest distress through outward externalizing problem behaviors, such as delinquency, drinking problems, substance abuse (Huselid & Cooper, 1994), and antisocial behaviors, such as aggression and conduct disorders (Hoffmann et al., 2004; Lemle & Mishkind, 1989). Male aggressive behavior has specifically been linked with negative social and mental health consequences, such as substance use (Wagner, 1996). Huselid and Cooper (1994) found that having traditional masculine gender roles (independence, assertiveness) was directly correlated with externalizing problem behaviors in adolescent males, but was unrelated to internalizing problem behaviors. More specifically, traditional masculine gender roles have been linked with greater alcohol involvement (Loury & Kulbock, 2007) and delinquent status among male adolescents (Lemle & Mishkind, 1989). Masculinity has also been found to mediate gender differences in depression (Wilson & Cairns, 1988), in other words to the extent that adolescent males scored lower than adolescent females in depression, this can be accounted for by adolescent males scoring higher than adolescent females in instrumentality.

Traditional feminine gender role attitudes have been linked with turning distress inward and internalizing problem behaviors in females (Landrine, 1989). More specifically, women report higher levels than men of psychological distress, depression, low self-esteem (Huselid & Cooper, 1994), anxiety, and somatic complaints (Hoffmann et al., 2004). On the other hand, Huselid and Cooper (1994) found that, for girls, having traditional feminine gender role values, such as submissiveness and dependency, was not correlated with internalizing problem behaviors and was associated with reduced rates of externalizing problem behaviors, including antisocial behavior, substance use, drinking, delinquency, and aggression (Chomak & Collins, 1987). This suggests that certain traditional gender roles might be a protective factor against expressing externalizing problem behaviors by encouraging less drinking and fewer alcohol problems among female adolescents (Zucker, Battistich, & Langer, 1981). However, it is less clear whether femininity is predictive of greater internalizing problem behaviors for girls.

Studies have found that gender differences in externalizing and internalizing problem behaviors are mediated by gender differences in gender roles (masculinity/instrumentality vs. femininity/expressivity). More specifically, traditional gender roles mediate a substantial portion of sex differences in both externalizing and internalizing problem behaviors in adolescents, with the higher internalizing problem behaviors of adolescent females being accounted for by higher femininity and expressivity, and the higher externalizing problem behaviors of adolescent males being accounted for by higher masculinity and instrumentality (Hoffmann et al., 2004; Huselid & Cooper, 1994). Huselid and Cooper (1992) also found that traditional gender roles mediate the sex difference in alcohol use in adolescents.

As noted earlier, some researchers (Marsh & Myers, 1986; Ricciardelli & Williams, 1995; Russell & Antill, 1984) have tried to address the seemingly contradictory findings of gender roles and internalizing and externalizing problem behaviors by differentiating between the adaptive and maladaptive aspects of masculinity and femininity in assessing the relationships between gender roles and internalizing and externalizing problem behaviors. Using this schema, Williams and Ricciardelli (1999) found that high negative masculinity and low positive femininity was a predictor of greater alcohol-related problems for both men and women. Low positive masculinity and low positive femininity also predicted problem drinking in both men and women, possibly due to a need to use alcohol to heighten one's sense of masculinity or femininity. It should be noted that these latter studies were all conducted with adult samples.

Another factor in the relationships among gender roles, internalizing and externalizing problem behaviors, and adolescent substance use is the impact of adaptive and maladaptive gender roles on peer relationships. Positive aspects of both masculinity and femininity would be expected to facilitate good peer relationships, whereas negative aspects of these gender roles would possibly undermine such relationships. Washburn-Ormachea, Hillman, and Sawilowsky (2004) found that femininity and androgyny were predictive of greater adolescent sensitivity to peer-caused stress. Whether the quality of such peer relationships increases or decreases substance use is harder to predict. Having deviant peers is associated with more externalizing behaviors (Lynne, Graber, Nichols, Brooks-Gunn, & Botvin, 2007) and with greater substance use, as was found in a study of Mexican-American adolescents by Roosa et al. (2005). More specifically, a study of Mexican adolescents found that both assertive and aggressive masculinity were positively correlated with reports of higher peer substance use (Kulis, Marsiglia, Lingard, Nieri, & Nagoshi, 2008). The susceptibility of Mexican-American youth to peer-influenced substance use is heightened by their relatively higher risk of encountering drug offers. Compared to African Americans and non-Hispanic White seventh graders, Mexican Americans are more likely to be offered drugs by their peers (Moon, Hecht, Jackson, & Spellers, 1999).

GENDER ROLES AND MACHISMO/MARIANISMO IN MEXICAN AMERICANS

The relationship among gender, gender roles, and alcohol and drug use has been researched in Mexican and Mexican-American adolescents (Kulis, Marsiglia, & Hecht, 2002; Kulis, Marsiglia, & Hurdle, 2003; Kulis et al., 2008). Mexican culture traditionally is viewed as promoting two primary gender roles that are called Machismo and Marianismo.

Machismo often is equated with the Mexican male stereotype of hyper-masculinity, a masculine cultural trait that is thought to derive from the subjugation of Indians during the Spanish conquest of the Americas (Hardin, 2002). Stereotypically, it commonly is associated with negative characteristics such as perpetration of and tolerance for domestic violence, abandonment of children, infidelity, alcoholism, and aggressive risk-taking behavior (Goldwert, 1983; Gutmann, 1996; Kulis et al., 2003). There is, however, a second meaning of Machismo centered on positive traits such as respect, honor, bravery, and a deep sense of family commitment (Marsiglia, Kulis, & Hecht, 2001). The term *hombre* is sometimes used to capture the positive aspects of Machismo (Kulis et al., 2008). An *hombre* does not beat his wife, sees to his family responsibilities, and is helpful in the home (Gutmann, 1996).

Marianismo has traditionally been seen as a source of strength (Marsiglia & Holleran, 1999) by which women are spiritually superior to men and therefore can endure the suffering inflicted by men. *La mujer* is sometimes used to capture the positive aspects of Marianismo (Kulis et al., 2008); that is, a capable, strong, and proactive woman who is concerned with the care and nurturance of her family (Rocha-Sanchez & Diaz-Loving, 2005). *La mujer abnegada* is passive

and endures bad male partners with both understanding and patience, sacrificing her needs for the good of her family. She is submissive, selfless, and dependent, enacting women's expected role of taking care of the children, spouse, and household. Although Marianismo can be characterized by self-sacrifice, collectivism, family devotion, and the nurturing of others, it can also encourage dependency, passiveness, and submissiveness (Kulis et al., 2003; Stevens, 1973).

Although Machismo and Marianismo seem to amplify negative aggressive masculine and negative subservient feminine aspects of gender roles, the literature suggests that this gender role difference is disappearing among younger generations of Mexicans, especially those in urban areas (Gutmann, 2003). Research has also found that Mexican-American females become more masculine as they are acculturated into U.S. culture and move further away from the values of their culture of origin (Portes & Rumbaut, 2001).

Traditional Mexican gender roles, Machismo and Marianismo, might play a role in the relationship between internalizing and externalizing problem behaviors and substance use. In general, men who ascribe to more traditional gender beliefs might engage in delinquent behavior and substance use to prove their masculinity or appear macho (Huselid & Cooper, 1994; Unger et al., 2006). Machismo and celebratory fiesta drinking emphasize both binge drinking (Caetano & Medina-Mora, 1988) and the ability to manage high levels of alcohol consumption without losing self-control (Loury & Kulbok, 2007). Mexican cultural norms encourage men to drink when and where they like, but there is far less tolerance and acceptance of excessive drinking by women (Medina-Mora & Rojas Guiot, 2003). Loury and Kulbok (2007) found that more male Mexican immigrants use alcohol than females. Machismo, with its emphasis on restricted emotionality, has also been found to be associated with greater stress and depression in Mexican-American men (Fragoso & Kashubeck, 2000).

Complementary to the effects of socialization into Machismo for males, it is likely that adolescent females' socialization into a subordinate traditional gender role might also contribute to internalizing problem behaviors in females. In terms of gender roles, Benjet and Hernandez-Guzman (2002) assessed Mexican early adolescents and found that pubertal change was associated with greater depression in adolescent females but no change in psychological adjustment in adolescent males. The researchers interpreted their results in terms of the greater physical adjustment required of adolescent females reaching the age of menarche.

Studies of the relationship of gender roles and alcohol and drug use conducted in Mexico are an important resource to inform our understanding of these relationships in Mexican-American adolescents. For a sample of Mexican adults, Lara-Cantu, Medina-Mora, and Gutierrez (1990) found that, for men, assertive masculinity and affective femininity were associated with greater alcohol use, but submissive femininity and aggressive masculinity were associated with greater alcohol use problems. For women, aggressive masculinity predicted greater alcohol use, whereas affective femininity predicted lesser alcohol use and alcohol use social problems, such as violence and difficulties with a partner. It should be noted that the Lara-Cantu et al. (1990) study used a measure of positive and negative masculinity that was similar to the one used in this study, although it incorporated more items to define the four dimensions. The study of Mexican adolescents by Kulis et al. (2008) differentiated between positive and negative gender roles in predicting substance use. In general, aggressive masculinity was predictive of greater substance use, whereas affective femininity was predictive of lower substance use for both boys and girls. Significant gender-specific effects were only found for affective femininity, which predicted lesser cigarette use among boys but not among girls, and aggressive masculinity, which was a stronger predictor of sharing or selling drugs for boys than for girls.

FOCUS OF STUDY

This study was designed to extend previous findings on the relationships among gender, gender roles, internalizing and externalizing problem behaviors, and alcohol and drug use in a sample of Mexican-American adolescents. The relationship between gender roles and adolescent internalizing and externalizing problem behaviors has been largely unexplored in Mexican Americans. This study aimed to (a) differentiate between positive and negative aspects of gender roles, and (b) assess the effects of positive and negative gender roles on alcohol and drug use. Given the well-established relationships between externalizing problem behaviors and substance use (e.g., Fergusson, Horwood, & Ridder, 2007; Timmermans, van Lier, & Koot, 2008) and between internalizing problem behaviors and substance use (e.g., Brook, Ning, & Brook, 2006) in adolescents, the research team aimed to (c) test whether the effects of gender roles on alcohol and drug use were mediated by externalizing and internalizing problem behaviors, and (d) to consider the place of peer substance use in the relationships of gender roles with alcohol and drug use.

Hypotheses

Although the studies by Hoffmann et al. (2004) and Huselid and Cooper (1994) did not differentiate between positive and negative aspects of masculinity, their findings suggest that assertive masculinity should be predictive of lesser internalizing problem behaviors in girls, and aggressive masculinity should be predictive of greater externalizing problem behaviors in boys. Their findings would also suggest that affective femininity should be predictive of lesser externalizing problem behaviors in boys, whereas submissive femininity should be predictive of greater internalizing problem behaviors in girls. Based on the findings of Williams and Ricciardelli (1999), which did differentiate between positive and negative gender roles, assertive masculinity and affective femininity were expected to predict lesser substance use in both boys and girls, and aggressive masculinity was expected to predict greater substance use in both boys and girls. Lara-Cantu et al.'s (1990) findings also suggest that aggressive masculinity would be associated with greater substance use in both boys and girls, but that assertive masculinity and submissive femininity would be associated with greater substance use in boys. The following hypotheses are discussed in terms of expected gender differences.

Boys

- Assertive masculinity will correlate with greater substance use and greater peer substance use for boys.
- Aggressive masculinity will correlate with more externalizing problem behaviors among boys and more substance use and peer substance use. An exploratory hypothesis here was that the effect of aggressive masculinity on substance use would be mediated by externalizing problem behaviors.
- Affective femininity will correlate with fewer externalizing problem behaviors and less substance use for boys.
- Submissive femininity will correlate with more substance use among boys. An exploratory hypothesis was that the effect of submissive femininity on substance use would be mediated by internalizing problem behaviors.

Girls

- Assertive masculinity will correlate with fewer internalizing problem behaviors and greater peer substance use for girls.

- Aggressive masculinity will correlate with more substance use and peer substance use for girls. An exploratory hypothesis here was that the effect of aggressive masculinity on substance use would be mediated by externalizing problem behaviors.
- Affective femininity will correlate with less substance use for girls.
- Submissive femininity will correlate with more internalizing problem behaviors and more substance use for girls. An exploratory hypothesis was that the effect of submissive femininity on substance use would be mediated by internalizing problem behaviors.

METHODS

Participants

The Latino Acculturation and Health Project is a study of how acculturation and health outcomes change over time among Latino families living in Arizona and North Carolina. This study utilizes adolescents' baseline data collected during the spring of 2005 in Arizona.

Participants were recruited following approved university institutional review board procedures from English as a second language adult classes, community centers, local churches, and community fairs. Criteria for inclusion was being a Latino or Latina, and agreeing that an adult and an adolescent (13–18 years of age) from each participating family would be interviewed. Individuals who showed interest were invited to participate in a study looking at the experiences of Latino youth and their parents in the United States. A participant information sheet provided to participants indicated that participation was voluntary and that participants were free to leave the study at any time. The confidential nature of participation was also explained and those who agreed to participate received \$20 each as a token of appreciation for their time and for opening their homes to the interviewers. Parents or guardians gave written consent for their adolescents to participate. The adolescents also gave written assent for their participation.

The analysis reported here utilizes data from 151 students (60 males and 91 females). The typical participant was in the eighth or ninth grade and 15 to 16 years of age. Their parents were relatively less educated, with completion of some high school. The average length of time students had been living in the United States was 11 years. Nearly all of the student respondents indicated that they, or their parents or grandparents, had been born in Mexico.

Procedures

All written materials were available in Spanish and English. Participants were given the choice to answer the questions on their own or to have interviewers read the questions to them. Most adolescents chose to work on the questionnaires on their own. However, interviewers reviewed each completed questionnaire before leaving the homes and were available to answer questions at the end of each interview. They also gave community referrals to participants as needed.

Master's-level students in social and behavioral sciences were trained to conduct the interviews at the participants' homes. Spanish was the first language for all interviewers, who were also fluent in English. Participants were given the choice to speak in either language, and could answer the questions on their own or have the interviewers read the questions to them. Eighty-seven adolescents chose to complete the questionnaires in English and 64 in Spanish. Each interview lasted approximately 45 minutes to 1 hour for a total duration of 1.5 to 2 hours per family. Before leaving the homes, the interviewers reviewed each questionnaire and were available to answer questions at the end of each interview.

Measures

Alcohol use—The alcohol use measure was computed by standardizing and averaging the responses across six items: number of days the adolescent had at least one drink of alcohol in the past 30 days, number of days the adolescent had five or more drinks in a row in the past 30 days, number of drinks of alcohol the adolescent had in the last 30 days, number of times the adolescent had drunk more than a sip of alcohol in the last 30 days, number of times the adolescent had drunk more than a sip of alcohol in his or her lifetime, and the extent to which the adolescent drinks alcohol without parents' permission. This last item is from the Youth Self-Report using a Likert scale from 0 (*not true*) to 3 (*very true or often true*; Achenbach & Edelbrock, 1987). Cronbach's alpha for the six indicators forming the alcohol use scale was $\alpha = .93$.

Cigarette use—Overall cigarette use was measured by standardizing and averaging three items: number of cigarettes the adolescent had smoked in the last 30 days, number of times the adolescent had smoked cigarettes in the last 30 days, and number of times the adolescent had smoked cigarettes over the lifetime. Cronbach's alpha for the cigarette scale was $\alpha = .82$.

Marijuana and other drug use—The marijuana and other drug use measure was computed by standardizing and averaging the responses across six items: number of hits of marijuana the adolescent had in the last 30 days, number of times the adolescent had smoked marijuana in the last 30 days, number of times the adolescent had smoked marijuana in his or her lifetime, number of times the adolescent had sniffed inhalants to get high in the last 30 days, number of times the adolescent had sniffed inhalants to get high in his or her lifetime, and the extent to which the adolescent uses drugs (not including alcohol or tobacco) for nonmedical purposes. This last item was from the Youth Self-Report (Achenbach & Edelbrock, 1987). Cronbach's alpha for this scale was $\alpha = .90$.

Gender roles—Measures of four gender role orientations were constructed from 12 items that were selected or adapted from those used by other researchers to map both positive and negative aspects of masculinity and femininity (Antill, Cunningham, Russell, & Thompson, 1981; Marsh & Myers, 1986; Ricciardelli & Williams, 1995; Russell & Antill, 1984). These items have shown high reliability and criterion validity in Mexican origin populations in the United States (Kulis et al., 2002; Kulis et al., 2003; Kulis et al., 2008). The items are also related thematically to those developed to measure gender identity orientations in a Mexican sample, employing an adaptation of the Bem Sex Role Inventory (Lara-Cantu, 1989; Lara-Cantu et al., 1990). To ensure linguistic and cultural equivalence, all items were translated and back-translated from Spanish to English using the method developed by Rogler (1989). Items asked students to describe how often they felt they fit gender-typed traits and behaviors, using a Likert scale ranging from 0 (*rarely*) to 4 (*always*).

There were three positive masculinity items measuring "assertive masculinity" that captured a sense of self-confidence, assertiveness, and goal orientation ($\alpha = .51$): "When I'm with my friends, I am a good leader," "I express my opinion even when others disagree," and "I have clear goals for myself." Three items measured negative or "aggressive" masculinity indicating dominance and control over others ($\alpha = .66$): "I am rude to others," "I am an aggressive person," and "I ignore rules that get in my way." "Affective femininity" included three items that measured nurturing, empathetic, and expressive aspects of femininity ($\alpha = .62$): "I am a sweet person," "I really want to know how others are feeling," and "When someone feels bad, I try to make them feel better." In contrast, the last three items measuring negative aspects of femininity, or "submissive femininity," tapped a sense of dependence and inadequacy ($\alpha = .50$): "When someone pressures me to do something, I just give in," "I have trouble making decisions," and "I spend time worrying about things."

Peer substance use—The peer substance use measure was computed by standardizing and averaging the responses across three true–false items: adolescent’s friends drink alcoholic beverages, adolescent’s friends use drugs, and adolescent’s friends bring drugs to parties. Cronbach’s alpha for this scale was $\alpha = .66$.

Internalizing and externalizing—Internalizing was characterized by behavioral overcontrol and overinhibition; “adolescent cries a lot,” “adolescent doesn’t have much energy,” and “adolescent is unhappy, sad, or depressed.” Externalizing was characterized by behavioral undercontrol and aggression; “adolescent disobeys his or her parents,” “adolescent physically attacks people,” and “adolescent cuts classes or skips school.” Scores for these variables were derived as secondary factor scores from the Youth Self-Report (Achenbach & Edelbrock, 1987). The 24 items indicating internalizing problem behaviors and the 32 items indicating externalizing problem behaviors formed reliable scales in this sample. Cronbach’s alpha for both the internalizing and externalizing scales was $\alpha = .86$.

RESULTS

Table 1 presents the means and standard deviations separately by gender for age, years lived in the United States, the four gender role scales, internalizing and externalizing problem behaviors, peer substance use, and alcohol, cigarette, and marijuana/inhalant/other drug use. As expected, adolescent females scored significantly higher than adolescent males on the two femininity and the internalizing scales, but surprisingly adolescent females also scored significantly higher than adolescent males on the externalizing scale. Also surprisingly, adolescent males and adolescent females did not significantly differ on the two masculinity scales. There were no significant gender differences on any of the substance use outcomes, or on the controls for age and length of residence in the United States.

Table 2 presents the partial correlations of the gender role scales with internalizing, externalizing, peer substance use, and alcohol, cigarette, and marijuana/inhalant/other drug use separately by gender and controlling for age and years lived in the United States. For both boys and girls, aggressive masculinity and submissive femininity were significantly and highly positively correlated with internalizing and externalizing problem behaviors, with aggressive masculinity also significantly positively correlated with peer substance use in both boys and girls. For boys, for the substance use variables, the positive gender role, assertive masculinity, was significantly but inversely correlated with alcohol use. In contrast, for girls, the negative gender roles, aggressive masculinity and submissive femininity, were significantly positively correlated with alcohol use.

Hierarchical multiple regression analyses were conducted to test for the mediating effects of internalizing, externalizing, and peer substance use on the relationships between gender roles and substance use. One of the requirements of mediation (Baron & Kenny, 1986) is that the predictor be significantly related to the dependent variable in the absence of the mediator, and the correlational analysis showed no significant relationships with either cigarette use or marijuana/inhalant/other drug use. Thus, these regression analyses were only conducted using assertive masculinity to predict alcohol use among adolescent males, and using negative gender roles to predict alcohol use among adolescent females. Two other requirements for mediation were generally met, namely that the gender role predictor was significantly related to the mediator and that the mediator, in turn, was significantly related to the dependent variable, alcohol use. To test for the last requirement of mediation, that the effect of the gender role predictor of alcohol use was reduced in the presence of the mediator, hierarchical multiple regression analyses first entered the control variables age and years lived in the United States (Block 1), followed by the mediator (Block 2), and then the gender role predictor (Block 3).

Results of these regression analyses are presented in Tables 3 and 4. In Tables 3 and 4, there are separate columns for each Block 2 mediator that was tested: internalizing, externalizing, and peer substance use. Each column presents the multiple R at the point a block is entered, the beta for the full model including all three blocks of predictors, and the R^2 change and model F statistic at the point a block is entered.

Table 3 presents the results for adolescent males and positive gender roles. Assertive masculinity continued to be a significant or nearly significant ($p < .10$) predictor of lower levels of alcohol use, even in the presence of internalizing and externalizing problem behaviors and peer substance use, and the magnitude of the standardized effect of assertive masculinity on alcohol use did not decline markedly from the baseline model without mediators to the three models that included each potential mediator in turn. These results provide strong indications that these latter variables did not mediate the relationship between assertive masculinity and alcohol use for males.

Table 4 presents the results for adolescent females and negative gender roles. Aggressive masculinity and submissive femininity predicted higher levels of alcohol use for girls in the baseline model without mediators, but unlike the results for boys, these two negative gender roles were no longer predictive of alcohol use after controlling for internalizing and externalizing problem behaviors or peer substance use, indicating that these variables almost completely mediated the relationship between girls' negative gender roles and alcohol use.

To test for the statistical significance of the mediated effects, the Aroian (1944/1947) version of the Sobel test suggested in Baron and Kenny (1986) was conducted. None of the mediated effects of assertive masculinity on alcohol use for adolescent males was significant, whereas five of the six tested mediated effects of negative gender roles on alcohol use were significant for adolescent females. The one nonsignificant mediated effect—of aggressive masculinity mediated by internalizing problem behaviors—was nearly significant at $p = .07$.

To summarize the results of the mediational analyses, for boys, alcohol use is negatively related to assertive masculinity, and this relationship holds even when the three mediators are entered into the model. For girls, alcohol use is positively related to aggressive masculinity and submissive femininity, and these relationships disappear when the three mediators are entered into the model.

DISCUSSION

One major finding from this research is that the adoption of negative gender roles is a risk factor for internalizing and externalizing problem behaviors for both male and female Mexican-American adolescents, regardless of any gender bias toward developing internalizing versus externalizing behavior problems. For both boys and girls, aggressive masculinity and submissive femininity predicted more internalizing and externalizing problem behaviors. More specifically, aggressive masculinity was associated with more peer substance use for both genders, which was consistent with the findings of Kulis et al. (2008), and submissive femininity showed a smaller nonsignificant correlation in the same direction. One explanation for these results is that aggressive girls tend to run with more aggressive crowds and therefore have more access to substances.

The second major finding is that assertive masculinity predicted lower alcohol use among the boys. This effect was not at all mediated by internalizing problem behaviors, externalizing problem behaviors, or peer substance use. The negative relationship between assertive masculinity and alcohol use contrasts with the findings of Lara-Cantu et al. (1990), who found a positive relationship with a sample of Mexican adults. In spite of the fact that negative gender roles, aggressive masculinity, and submissive femininity were highly predictive of

internalizing and externalizing problem behaviors in boys, these negative gender roles did not predict boys' alcohol and drug use. Taken together, these findings suggest that Mexican-American adolescent boys' alcohol use is driven by social factors, compared to the psychiatric factors that drive alcohol use in Mexican-American adolescent girls.

As Caetano and Medina-Mora (1988) noted, traditional Mexican gender roles of Machismo and fiesta drinking emphasize both binge drinking and the ability to sustain high levels of alcohol consumption without losing self-control, but only for men, not women (Loury & Kulbok, 2007). Unger et al. (2006) found that Mexican-American men with more traditional gender beliefs consistent with authoritarianism and strong decision-making skills might engage in delinquent behavior and substance use to prove their masculinity or appear macho. As noted earlier, Mexican cultural norms encourage men to drink when and where they like, although there is far less tolerance and acceptance of excessive drinking by women (Medina-Mora & Rojas Guiot, 2003). It is still not clear why in this sample the result is an inverse correlation between assertive masculinity and alcohol use in Mexican-American adolescent boys. One possibility is that this pattern is the result of the acquisition of effective communication skills dealing with drug use, due to acculturation, such that drinking is not associated with masculinity in more acculturated boys. It should also be noted that Unger et al.'s (2006) and Lara-Cantu et al.'s (1990) studies of Mexican men, on which this study's hypothesis was based, is not highly applicable to this study's population of Mexican-American adolescent boys in the United States.

The third major finding from this research is that aggressive masculinity and submissive femininity were significantly correlated with greater alcohol use, but only for girls. These results are only partially consistent with the study of adolescents living in northern Mexico (Kulis et al., 2008), which found that aggressive masculinity but not submissive femininity was predictive of substance use for both boys and girls. One explanation behind these findings is that girls' socialization into a subordinate role leads to possible internalizing problem behaviors and distress, which would then increase the likelihood of using substances (Landrine, 1989). Another possibility is that the inability for the girl to be able to cope with the expected gender roles of the new culture would actually increase the likelihood for aggressiveness. At a minimum, the new American culture is more lenient regarding drinking, thus creating a lack of consequences in consuming large amounts of alcohol. Relational aggression has been shown to be prevalent and often socially acceptable among many adolescent girls, but is not always correlated with negative effects such as deviant social behaviors (Bowie, 2010). It should be noted, though, that even though it might be more socially acceptable for young girls to drink large quantities of alcohol in the United States, there is still a delicate line where their behavior becomes too aggressive and a stigma is therefore attached.

For this sample and consistent with the hypotheses for girls, the effects of aggressive masculinity and submissive femininity on alcohol use in girls were almost completely mediated by internalizing problem behaviors, externalizing problem behaviors, and peer substance use. It would appear that, for these Mexican-American adolescent girls, alcohol use might be a response to psychological distress that is exacerbated by socialization into the expectations of a subordinate gender role. These results are consistent with Benjet and Hernandez-Guzman's (2002) research with Mexican early adolescents that found that pubertal change was associated with greater depression in adolescent females but no change in psychological adjustment in adolescent males. The greater physical adjustment required of adolescent girls reaching the age of menarche and adolescent girls' socialization into a subordinate social role are thought to contribute to greater internalizing problem behaviors in these girls compared to boys in general and might also contribute to girls feeling bad about themselves. This could be particularly problematic in a Mexican culture that subordinates women to men more than mainstream American culture.

Marsiglia and Holleran's (1999) qualitative research also noted how Mexican-American girls experience a contrast between the elevated status of Marianismo, as taught in traditional Mexican families, and the lack of support for these gender role beliefs in U.S. culture and with their more acculturated peers. The marginalization from both cultures experienced by Mexican-American girls, as they become more acculturated, is further exacerbated by the sense that boyfriends and fathers use beliefs in traditional gender roles to subordinate girls. Becoming aggressive might be a response to this marginalization, or this marginalization might encourage girls to associate with more aggressive peers.

IMPLICATIONS FOR PRACTICE

Gender roles are the result of socialization practices meant to internalize in children culturally appropriate gender-related behaviors. To the extent that gender roles act as risk or protective factors for the development of substance use problems, these roles are promising targets for interventions to reduce substance use. This might be particularly appropriate for addressing substance use problems for boys and girls of Mexican heritage given the bipolar gender role differentiation encouraged by the Mexican traditions of Machismo and Marianismo.

The findings reported here, however, suggest the need to consider how gender roles differentially play into the different psychological vulnerabilities of adolescent boys versus girls. For adolescent boys, masculinity is associated with social privilege. The development of the positive aspects of masculinity, such as assertiveness and task orientation, would be consistent with good psychological adjustment and less need for substance use. The aggressive, risk-taking aspects of negative masculinity that lead to substance use in boys might simply be extremes of the positive aspects of masculinity, particularly for Mexican-American boys raised in the tradition of Machismo. For Mexican-American boys, interventions to reduce substance use could target the socially adaptive functions of masculine behaviors that work in both Mexican and U.S. cultures.

For adolescent girls, on the other hand, even positive femininity, which includes emotional expressiveness and relationship orientation, is associated with a loss of social privilege. For some girls, this conflict might lead to the adoption of maladaptive gender roles, such as submissive femininity and aggressive masculinity, as well as psychological distress leading to deviant peer relationships and substance use. Mexican-American girls coming from a tradition of Marianismo might be particularly vulnerable when confronted with a mainstream American culture that does not value submissive femininity as expressed by Marianismo. This can lead to a sense of alienation and lack of belonging from both cultures (Marsiglia & Holleran, 1999). Here, interventions to reduce substance use need to target the psychological distress and acculturation stress associated with this marginalization from both the Mexican and U.S. cultures (Berry, 2006) with an understanding of the cultural transitions of girls' expected gender roles.

LIMITATIONS AND FUTURE RESEARCH

It should be noted that this sample was a convenience sample and is not meant to be representative of all Mexican Americans. This sample was also small, with an unequal number of males versus females, limiting statistical power. The gender role measures had only three items for each subscale, and the internal consistency (α) of these subscales was marginal, with no alphas greater than .66. In addition, there were no differences between the girls and boys on the male gender orientation scales, which can lead to questions of measure validity for those items. However, it should be noted that past research has found that Mexican-American females become more masculinized as they are acculturated into the U.S. culture (Portes & Rumbaut, 2001), which might account for this. Future research should include a larger sample size and

a longitudinal design that allows for tracking the effect of early gender role socialization on later adolescent internalizing and externalizing problem behaviors and substance use. Future research should explore the reasons that gender predicts substance use (e.g., drug offers, opportunity structures, compositions of peer networks) and whether these differ in Mexican adolescents versus the general adolescent population. Future research should also consider the moderating effects of acculturation on gender roles and substance use.

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FIGURE 1.
Conceptual model testing the relationship between gender roles and substance use with the mediating effects of psychiatric problems and peer substance use.

TABLE 1

Means and Standard Deviations by Gender

	Males		Females		<i>t</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Age	15.49	1.24	15.55	1.26	-0.28
Years lived in U.S.	10.29	5.64	11.98	5.30	-1.86
Aggressive masculinity	1.94	.78	1.81	.61	1.10
Assertive masculinity	3.67	.73	3.89	.71	-1.81
Affective femininity	3.53	.81	4.07	.65	-4.30***
Submissive femininity	2.42	.72	2.70	.70	-2.39*
CBCL internalizing	6.38	4.61	10.14	6.63	-3.82***
CBCL externalizing	10.55	6.91	13.05	7.90	-2.00*
Peer substance use	.01	.75	-.01	.79	0.13
Alcohol use	-.06	.66	.05	.98	-0.75
Cigarette use	-.09	.47	.05	1.01	-1.02
Marijuana/other drug use	.00	.71	.00	.89	0.04

Note: CBCL = Child Behavior Checklist.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

Partial Correlations of Substance Use, Gender Roles, Internalizing, Externalizing, and Peer Substance Use Controlling for Age and Years in United States

TABLE 2

	Alcohol	Cigarette	Marijuana	+ Masc.	- Masc.	+ Fem.	- Fem.	Intern.	Extern.	Peer sub.
Alcohol use	.32*	.19	-.18	.31**	-.10	.25*	.34**	.44***	.40***	
Cigarette use	.60***	.26*	-.17	.16	.03	.01	.14	.19	.01	
Marijuana use	.37*	.04	.10	.10	-.05	.11	.04	.23*	.34**	
Assertive masculinity	-.27*	-.20	-.19	-.12	.51***	-.22	-.34***	-.21	-.16	
Aggressive masculinity	.19	.19	.05	-.01	.39***	.49***	.67***	.34***		
Affective femininity	-.22	-.19	.58	-.08	.07	-.11	-.15	-.03		
Submissive femininity	.10	.15	.07	.49***	-.03	.41***	.37***	.25*		
Internalizing	.06	.21	.03	.56***	.06	.64***	.68***	.43***		
Externalizing	.37**	.34**	-.07	.74***	-.14	.42***	.62***	.48***		
Peer substance use	.19	.03	-.30*	.27*	-.20	.25	.31*	.37**		

Note: Females above diagonal; males below diagonal.

* $p < .05$.

** $p < .01$.

*** $p < .001$.

TABLE 3
 Hierarchical Multiple Regressions of Alcohol Use on Age, Years in United States, Mediators (Internalizing, Externalizing, and Peer Substance Use), and Assertive Masculinity: Males ($N = 60$)

Mediator	Internalizing			Externalizing			Peer substance use			
	Beta ^a	Mult. R	ΔR^2	Beta ^a	Mult. R	ΔR^2	Beta ^a	Mult. R	ΔR^2	F change
Block 1										
Age	.23 ⁺			.22 ⁺			.17			
Years in U.S.	.33 [*]	.35	.12	.27 [*]	.35	.12	.32 [*]	.35	.12	3.47 [*]
Block 2										
Mediator	.01	.35	.00	.25 ⁺	.45	.08	.20	.43	.06	3.89 ⁺
Block 3										
Assertive masculinity	-.31 [*]	.46	.09	-.28 [*]	.52	.07	-.26 [*]	.50	.06	4.06 [*]

^aBeta for final equation.

⁺ $p < .10$.

^{*} $p < .05$.

^{**} $p < .01$.

^{***} $p < .001$.

TABLE 4
 Hierarchical Multiple Regressions of Alcohol Use on Age, Years in United States, Mediators (Internalizing, Externalizing, and Peer Substance Use), and Negative Gender Roles: Females ($N = 91$)

Mediator	Internalizing				Externalizing				Peer substance use			
	Beta ^a	Mult. R	ΔR^2	F change	Beta ^a	Mult. R	ΔR^2	F change	Beta ^a	Mult. R	ΔR^2	F change
Block 1												
Age	.30 **				.25 *				.14			
Years in U.S.	.13	.35	.12	5.73 **	.14	.35	.12	5.73 **	.08	.35	.12	5.73 **
Block 2												
Mediator	.23 *	.48	.10	10.78 **	.40 ***	.55	.18	20.33 ***	.50 ***	.63	.27	34.91 ***
Block 3												
Aggressive masculinity	.19 +	.50	.03	2.79 +	.04	.55	.00	0.08	.13	.64	.02	2.01
Block 1												
Age	.31 **				.25 *				.14			
Years in U.S.	.12	.35	.12	5.69 **	.14	.35	.12	5.69 **	.08	.35	.12	5.69 **
Block 2												
Mediator	.28 *	.47	.10	10.75 **	.39 ***	.55	.18	20.23 ***	.52 ***	.62	.27	35.40 ***
Block 3												
Submissive femininity	.12	.49	.01	1.17	.09	.55	.01	0.74	.11	.63	.01	1.51

^a Beta for final equation.

+ $p < .10$.

* $p < .05$.

** $p < .01$.

*** $p < .001$.