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Marijuana Use Among Latino Adolescents: Gender Differences in Protective Familial Factors

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Abstract

Given the important contextual function of family dynamics and traditional gender roles in Latino cultures, parental influences on substance use among Latino adolescents may differ across genders. This study examined associations between family factors (parental monitoring, parent–child communication, family cohesion, and familism) and marijuana use among 1,369 Latino adolescents in Southern California. Students from seven schools completed surveys in 9th and 11th grades. Longitudinal hierarchical linear regression analyses evaluated the associations between family factors in 9th grade and lifetime marijuana use in 11th grade, as well as gender differences in these associations. Girls reported higher levels of parental monitoring, parental communication, and familism than boys did, but there were no gender differences in family cohesiveness. In a regression model controlling for covariates and previous marijuana use, parent–child communication and family cohesion in 9th grade were each uniquely predictive of lower levels of marijuana consumption in 11th grade. Gender was a statistical moderator, such that higher levels of parent–child communication predicted lower marijuana use among boys, whereas girls' use was relatively low regardless of parent–child communication levels. Results are discussed in the light of the concurrent socialization processes of family and gender in Latino culture and its relation to preventing delinquent behaviors such as marijuana use.

Keywords

adolescents; family; gender; Hispanic; Latino; longitudinal; marijuana; parents

INTRODUCTION

Marijuana is the most widely used illicit drug among adolescents in the United States (National Institute on Drug Abuse [NIDA], 2005; National Survey of Drug Use and Health [SAMHSA], 2010). Though sometimes dismissed as an experimental behavior typical in the teenage years (Hall, 2006; Lee, Neighbors, & Woods, 2007; Turner, 1996), marijuana usage is associated with an increased risk of progression to use of other drugs, suspension or expulsion from school, lower educational attainment, unstable employment, and incarceration (Brook, Adams, Balka, & Johnson, 2002; Fergusson, Boden, & Horwood,

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Declaration of Interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the article.

2006; Hall & Lynskey, 2005; Jacobus, Bava, Cohen-Zion, Mahmood, & Tapert, 2009; Stuart & Green, 2008). Alarming, 84% of high school seniors perceive marijuana as “very easy” or “fairly easy” to obtain (Johnston, O’Malley, Bachman, & Schulenberg, 2009). In California, where medical marijuana clinics have proliferated in recent years while enforcement of laws limiting tobacco and alcohol sales to minors has increased, some adolescents may be able to obtain marijuana as easily as, or even more easily than, tobacco or alcohol.

Because Latinos are the most rapidly growing ethnic group in the United States (US Census Bureau, 2007), research on the factors affecting marijuana use in this group is particularly important. Among Latino youth, lifetime marijuana usage is 18.1% at 8th grade, 34.8% at 10th grade, and 40.1% at 12th grade (Johnston et al., 2009). Caucasian, compared with Latino, high school students exhibit higher monthly rates of alcohol, cigarette, and marijuana usage, but this racial gap was separated by the fewest percentage points for marijuana (US Department of Health and Human Services, 2003). Latino adolescents might face numerous challenges that increase their risk of drug use, including acculturative stress, ethnic discrimination, socioeconomic stress, and lack of educational and vocational opportunities (Szapocznik, Prado, Burlew, Williams, & Santisteban, 2007; Unger et al., 2004). Interestingly, several studies have documented a large gender gap in marijuana use among Latino adolescents, with boys more likely to use marijuana than girls (Basáñez & Lac, 2010). For example, in the 2008 National Survey of Drug Use and Health (SAMHSA, 2010), the gender difference in lifetime marijuana use was 4.4 percentage points among Latinos (18.8% of boys vs. 14.4% among girls), but only 0.2 percentage points among Whites (17.0% among boys vs. 16.8% among girls). This suggests that Latino boys may be at risk for experimentation with marijuana, whereas sociocultural and/or family factors may partially buffer Latino girls from this risk.

Traditional gender roles typically associated with Latino values may account for these gender differences in marijuana use. In traditional Latino cultures, girls are typically socialized to be homebound and to help with household and caretaking duties, whereas boys are given more opportunities for autonomy (Arriagada, 2005). The Latino cultural value of machismo emphasizes masculinity, male dominance, sexual prowess, physical strength, and honor (Cuellar, Arnold, & Gonzalez, 1995; Neff, Prihoda, & Hoppe, 1991). Latino adolescent boys might experiment with drugs as a way of asserting their independence and proving their toughness and masculinity. Because they are given more autonomy by their parents, boys also may have more opportunities to experiment with risky behaviors without adult supervision. Conversely, the Latino cultural value of Marianismo (emulating the Virgin Mary) stresses the importance of caregiving as a role for women, which includes providing instrumental and emotional support to family members, maintaining family traditions, preserving the integrity of the family, and self-sacrifice, rather than striving for personal achievement and independence (Gil & Vasquez, 1996). Girls are socialized to be interdependent and to foster that interdependence within the family. Therefore, adolescent girls may be socialized to spend more time at home and may be strongly discouraged from participating in rebellious behaviors such as drug use.

Familial Factors

Family plays an important role in adolescent development across cultural groups, but it may be especially important in immigrant groups (Schwartz, 2009). Immigrant parents often find themselves raising their children in a cultural environment that is unfamiliar, unsupportive, and sometimes even hostile. Therefore, it is not surprising that the majority of Latino parents espouse a “protective” parenting style, characterized by limiting their children’s autonomy and opportunities to interact with the dominant culture, while still expressing warmth and enforcing rules (Domenech Rodriguez, Donovan, & Crowley, 2009). Considering the

central role of the family in Latino cultures (Unger, Ritt-Olson, Wagner, Soto, & Baezconde-Garbanati, 2009), family dynamics may be especially important protective influences against marijuana use. Among the various protective family factors commonly cited in the literature are parental monitoring, parental communication, family cohesion, and familism.

Parental monitoring is arguably the most consistently studied family construct in the literature. Studies have found inverse associations between parental monitoring, defined as parents keeping track of their child's whereabouts (Cohen, Richardson, & Labree, 1994) and substance use (Caldwell, 2006; Crano, Siegel, Alvaro, Lac, & Hemovich, 2008; Macaulay, Griffin, Gronewold, Williams, & Botvin, 2005; Parker & Benson, 2004). A recent meta-analytic review, involving over 35,000 participants across 17 studies, supported the linkage between parental monitoring and lower rates of marijuana use, both cross-sectionally and longitudinally (Lac & Crano, 2009). Among Latino youth specifically, parental monitoring has been associated with lower rates of substance use, either directly (Griffin, Botvin, Scheier, Diaz, & Miller, 2000; Ramirez et al., 2004), by influencing the child's selection of drug-using versus non-drug-using friends (Sieving, Perry, & Williams, 2000; Simons-Morton, & Chen 2005), or by mitigating the negative influences of substance-using peers (Lopez et al., 2009).

Family communication also may be protective against marijuana use. Several patterns of family communication have been identified (Fasula & Miller, 2006; Ritchie, 1991), including concept orientation (egalitarian communication without fear of censure for holding divergent opinions, which may be more common in the US culture) and socio-orientation (maintaining harmonious interpersonal relationships and avoiding arguments, which is similar to the traditional Latino value of *simpatía* and may be more common in Latino cultures). There is no clear consensus about which family communication pattern is preferable, but studies have shown that Latino adolescents' perceptions of having good communication with their parents are protective against risky behaviors during adolescence (Davidson & Cardemil, 2009), including marijuana use (Pokhrel, Unger, Wagner, Ritt-Olson, & Sussman, 2008), cigarette smoking (Elder et al., 2000; Shakib et al., 2003), hard drug use (Ellickson & Morton, 1999), and sexual risk behaviors (Buzi, Smith, Weinman, 2009; Fasula & Miller, 2006; Lloyd, 2004).

Family cohesion, defined as strong emotional bonds or closeness between family members (Behnke et al., 2008), may be another pivotal family factor among Latinos (Baer & Schmitz, 2007; Basáñez & Lac, 2010). Members of cohesive families have similar goals, enjoy spending time together, and value interdependence and the exchange of emotional and instrumental support; therefore, they may be less likely to seek support from people outside the family, including peers who engage in delinquent behaviors. Among Latino adolescents, family cohesion has been associated with lower levels of alcohol use (Bray, Adams, Getz, & Baer, 2001; Marsiglia, Kulis, Parsai, Villar, & Garcia, 2009) and illicit drug use (Gil, Vega, & Biafora, 1998).

Familism is a Latino cultural value that stresses the importance of maintaining strong family ties, the feeling of loyalty to the family, and the commitment to the family over individual needs and desires (Coohey, 2001; Negy & Woods, 1992; Staples & Mirandé, 1980). Of course, cultural values such as familism are evolving, contextual and fluid, and there is significant variation in familism across individuals within the Hispanic community. However, cultural psychologists generally agree that familism is one of the core values in many Hispanic societies. Because some research supports the relationship between familism and lower lifetime marijuana use in Latino adolescents (Ramirez et al., 2004), further quantification of family-related variables is warranted.

Current Study

In spite of the high levels of illegal marijuana usage among adolescents and its associated detrimental consequences (Hall, 2006; Lee et al., 2007), to our knowledge, few studies have investigated the independent and interactive influences of multiple family factors and gender among Latino adolescents. Among the studies examining at least two protective family factors in Latino youth, Forehand, Miller, Dutra, and Chance (1997) discovered that parental monitoring, but not parent–child communication, predicted less deviant behaviors. Ramirez et al. (2004) found that both parental monitoring and familism concurrently predicted decreased consumption of marijuana. Pokhrel and colleagues (2008) found that both parental monitoring and parent–child communication were protective against marijuana use. Although several studies have examined how acculturation and family dynamics impact behavior among Latino adolescents (Buchanan & Smokowski, 2009; Martinez, 2006; Pasch et al., 2006; Unger et al., 2009; Wagner et al., 2008), most of the acculturation literature has not explored family relationships in depth (Lau et al., 2005; Unger et al., 2009) or has focused on outcomes other than substance use (Christenson, Zabriskie, Eggett, & Freeman, 2006; Dennis, Basáñez, & Frarahmand, 2010; Rodriguez, Mira, Paez, & Myers, 2007; Schwartz, Pantin, Prado, Sullivan, & Szapocznik, 2005).

When assessing the contribution of parenting factors, previous research on adolescent marijuana usage has frequently neglected to rule out important covariates. Being older and perceiving peer norms toward usage have been found to be positively associated with increased drug usage among Latino adolescents (Parsai, Voisine, Marsiglia, Kulis, & Nieri, 2009). Foreign-born children may experience greater acculturative challenges than their native-born counterparts but, on the other hand, foreign-born children may be more receptive to traditional parenting practices and therefore experience fewer conflicts with their parents (Unger et al., 2004). The present study examined the associations between four hypothesized familial protective factors (parental monitoring, parent–child communication, family cohesion, and familism) and marijuana use among Latino adolescents over a two-year period. We hypothesized that these family factors would be protective against marijuana use, even after controlling for age, US born status, peer marijuana norms, and past usage. We also hypothesized that gender might moderate the influence of family factors on marijuana use, given differences in child-rearing practices due to views on gender roles in Latino families.

METHOD

Participants

The sample consisted of 1,369 Latino adolescents who completed surveys during both 9th grade (T1) and 11th grade (T2) as part of a longitudinal study of Latino adolescents and substance use (Unger et al., 2009). The participants' mean age was 13.99 years at 9th grade ($SD = 0.39$), with a gender distribution of 45.7% male and 54.3% female, and 88.4% reporting they were born in the United States. Respondents were students attending seven high schools in the Los Angeles area. Schools were approached and invited to participate if they contained at least 70% Latino students, as indicated by data from the California Board of Education, and were not participating in other studies or interventions designed to address variables of interest in this study. Efforts were also made to obtain a sample of schools with a wide range of socioeconomic characteristics. The median annual household incomes in the ZIP codes served by the schools ranged from \$29,000 to \$73,000, according to 2000 US Census data. Approval was obtained from the school principals and/or district superintendents, according to their established procedures, as well as the University's Institutional Review Board.

Recruitment

All 9th-grade students in these selected schools were invited to participate in the survey. A team of trained research assistants conducted the recruitment and data collection. The research assistants were ethnically diverse (Latino, White, and Asian), ranged in age from 21 to 30 years, represented both genders, and had previous experience conducting school-based research. The research assistants visited the students' classrooms, explained the study, and distributed consent forms for the students to take home for their parents to sign. If students did not return the consent forms, the research assistants telephoned their parents to ask for verbal parental consent. Students with written or verbal parental consent were allowed to participate. Although the students were minors and could not give legal consent, they were given the opportunity to assent or decline to participate, as a way of involving them in the decision-making process. This procedure was approved by the university's Institutional Review Board.

A total of 3,218 students were invited to participate. Of those, 2,420 (75%) provided parental consent and student assent. Of the 2,222 students who completed the 9th grade survey (92%), 1,963 (88%) self-identified as Hispanic or Latino or reported a Latin American country of origin. Their countries of origin included Mexico (84%), the United States (29%), El Salvador (9%), Guatemala (6%), and Honduras (1%) (respondents could select more than one country of origin). Of those 1,963 Latino students, 1,369 completed measures at both 9th and 11th grades, the final sample used in our analyses. Attrition analyses on the variables revealed that compared with Latino adolescents completing measures in only the 9th grade, Latino adolescents completing measures at both rounds tended to be slightly younger in age ($p < .05$), more likely to be female ($p < .01$), born in the United States ($p < .05$), less likely to use marijuana at 9th grade ($p < .001$), and perceived higher scores on the four parenting factors (all $p < .05$).

Survey Procedure

On the day of the survey, the data collectors distributed surveys to all students who had provided parental consent and student assent. Using a standardized script, they reminded the students that their responses were confidential and that they could skip any questions they did not want to answer. The classroom teachers were present during survey administration, but the data collectors instructed them not to participate in the survey process to ensure that they would not inadvertently see the students' responses. To help students with low literacy skills, the data collectors also read the entire survey aloud during the class period so that the students could follow along.

The data collectors returned to the schools when the students were in 11th grade. Students who could be located in the same schools (and students who had transferred to another school participating in the study) completed follow-up surveys in their classrooms, using the same procedure used in 9th grade. Extensive tracking procedures were used to locate the students who had transferred schools. For the 9th grade survey, students filled out a Student Information Sheet with contact information such as their home addresses, home phone numbers, cell phone numbers, parents' cell phone numbers, e-mail addresses, and addresses and phone numbers of a relative or close family friend who would know their whereabouts if they moved. School personnel also provided forwarding information if available. Data collectors telephoned the missing students in the evenings and surveyed them by telephone.

Translations

Surveys were available in English and Spanish. To create the Spanish translations, we first looked for the translated items that were published or recommended by the scales' authors. If none were available, one translator translated the items from English to Spanish, and then

the translation was checked by a translation team including bilingual researchers of Mexican, Salvadoran, and Argentinean descent. This procedure was used to ensure that the Spanish translation reflected the idioms that are used among Latinos living in Southern California. Although English and Spanish versions were available, only 17 students chose to complete the survey in Spanish.

Measures

Demographic variables included age (“How old are you?”), gender (“What is your sex?”), and US native status (“In what country were you born?” [United States vs. other]).

Peer marijuana norms were assessed with the question, “Out of every 100 students your age, how many do you think smoke marijuana once a month or more?” Respondents answered on a scale from 1 (none of them) to 11 (about 100), with each successive level separated by 10.

Parental monitoring ($\alpha = .60$) was assessed with three items (Cohen et al., 1994): “When you go out with your friends, do your parents ask where you are going?” “How important is it to your parents to know where you are at all times?” “How often do your parents know where you really are?” These three items were anchored on scales of 1 (no, never) to 4 (yes, always), 1 (not important at all) to 4, and 1 (never) to 4 (very often), respectively.

Parental communication ($\alpha = .85$) was assessed with four questions (Cohen et al., 1994): “How often do you talk to your parents about what’s on your mind?” “How often do you ask your parents for advice?” “How often do you tell your parents your secrets?” “If you had a problem, would you be able to talk to your parents about it?” The first three items were scaled from 1 (never) to 4 (very often), and the last was scaled from 1 (probably no) to (definitely yes).

Family cohesion ($\alpha = .77$) was assessed with 11 items, including “Family members feel very close to each other.” “In our family, everyone shares responsibility.” “Family members like to spend their free time with each other.” “Family members go along with what the family decides to do.” Responses were reported on a scale from 1 (almost never) to 5 (almost always). These items were selected from the FACES-II scale (Olson, Portner, & Bell, 1982), because they had the highest factor loadings and best psychometric properties in a similar sample of adolescents who were enrolled in the pilot for the current study.

Familism ($\alpha = .77$) was assessed with four items (Unger et al., 2006): (1) “If one of my relatives need a place to stay for a few months, my family would let them stay with us.” (2) “I expect my relatives to help me when I need them.” (3) “When a family makes an important decision, they should talk about it with their close relatives.” (4) “If anyone in my family needed help, we would all be there to help them.” All items were rated on a 1 (definitely no) to 4 (definitely yes) scale.

Marijuana use was assessed with the following question: “During your lifetime, how many times have you ever used marijuana?” Responses were rated on a scale from 1 (0 times) to 6 (40 or more times).

Statistical Analysis

Examination of the distributional properties of the variables used in the study indicated that they were relatively normal, with skewness levels of all variables below 3.0. Given the assessment of a non-normative and illegal behavior, some variable skewness is expected. Correlation analyses examined bivariate relationships among the variables. Next, independent samples *t*-tests determined systematic group-based mean differences between boys and girls on each of the four parenting factors and on T1 and T2 marijuana use. Effect

size was represented with Cohen's d (1988). Finally, a three-step hierarchical linear regression model was estimated, to offer a more comprehensive view of the T1 predictors prospectively associated with marijuana use at T2. In step 1, the covariates of gender (1 = boy, 0 = girl), age, birthplace in the United States (1 = yes, 0 = no), and T1 marijuana use were entered into the model. Step 2 involved entry of the four familial factors of parental monitoring, parental communication, family cohesion, and familism. In step 3, gender was specified to moderate each of the familial factors from the previous step.

Interactions in the final regression model found to be statistically significant were graphed and interpreted according to established procedures, controlling for all other effects (Aiken & West, 1991). Accordingly, predictors were standardized prior to entry into the model to avoid problems associated with multicollinearity (Cohen, Cohen, West, & Aiken, 2003). As such, the variance inflation factor (VIF) values of all predictors were below 1.5.

RESULTS

In 9th grade, 19% of the respondents reported lifetime marijuana use. By 11th grade, lifetime marijuana use had increased to 35%.

Correlations

The correlation matrix, shown in Table 1, yielded several noteworthy results. Correlations among the four familial factors were moderate in magnitude (value of r ranging from .23 to .45, all $p < .001$), providing evidence to support that these are interrelated, but conceptually distinct, constructs. Among the familial factors, the highest correlation was between communication and cohesion ($r = .45, p < .001$). Consistent with expectations, lower scores on each of the four familial factors, representing less protective effects of family, significantly correlated with higher use of marijuana at T1 and T2 (value of r ranging from $-.08$ to $-.23$, all $p < .01$). As expected, peer marijuana norms correlated significantly with marijuana use at T1 ($r = .28, p < .001$) and T2 ($r = .16, p < .001$).

Gender Differences

Mean differences between adolescent boys and girls on familial factors and marijuana use are presented in Table 2. Relative to boys, girls reported higher levels of peer marijuana norms ($p < .001$), parental monitoring ($p < .001$), parental communication ($p < .001$), and familism ($p < .001$). There was no significant gender difference in family cohesion. Boys reported higher levels of lifetime marijuana use than girls at T2 ($p < .001$) but not at T1, suggesting that the gender disparity in the level of marijuana usage among Latino teenagers might emerge later in adolescence.

Predictive Model

The three-step hierarchical multiple regression predicting T2 marijuana use is presented in Table 3. Results are interpreted at the final step with all predictors entered into the model, $F(13, 1,355) = 39.98, p < .001$. The following T1 predictors uniquely contributed a statistically significant proportion of the variance in T2 marijuana use: male gender ($\beta = .09, p < .001$), prior marijuana use ($\beta = .43, p < .001$), poor parental monitoring ($\beta = -.06, p < .05$), poor parental communication ($\beta = -.07, p < .01$), poor family cohesion ($\beta = -.12, p < .001$), and the gender $\times$ parental communication interaction ($\beta = -.06, p < .001$). After controlling for all predictors in the model, peer marijuana norm no longer remained predictive of subsequent marijuana use.

The statistically significant interaction, graphed in Figure 1, reveals that parental communication was associated with lower levels of marijuana consumption among boys.

Specifically, in households with lower levels of parental communication, boys used marijuana at a higher rate than girls; however, in households possessing high parental communication, marijuana usage among boys dropped to a rate almost comparable to that of girls. Decomposition of this interaction effect indicated that the slope for boys was statistically significant ($B = -.30, p < .001$), but that the slope for girls was not significantly different from zero ($B = -.01, ns$).

DISCUSSION

This longitudinal study of Latino adolescents examined familial protective factors for marijuana use and assessed gender differences in these associations. Rather than assessing the influence of a single parenting factor (e.g., parental monitoring), the current research unraveled which of the four critical familial factors uniquely predicted marijuana use two years later. Parental monitoring, parental communication, and family cohesion each emerged as protective factors, even after controlling for the risk factors of peer marijuana norms, past marijuana use, and demographic covariates. Of the four familial factors in the regression model, family cohesion yielded the strongest protective effect, suggesting that the feelings of connectedness and enjoyment of spending time with family might represent a greater desire to be around parents and therefore fewer opportunities to affiliate with delinquent others. Research has found that, in Latino and African American households, when parent–child communication was high and stable across each of three years, children were least likely to use marijuana (Tobler & Komro, 2010). Though bivariate correlated with marijuana use, familism was no longer revealed to be significant when accounting for the covariates, inconsistent with research reporting the significant relationship of familism on lifetime marijuana use when controlling for one other family factor, parental monitoring (Ramirez et al., 2004).

Furthermore, the protective effect of communication statistically interacted with gender. Girls' marijuana use was low regardless of their levels of parent–child communication, but boys showed significantly higher levels of marijuana use only when parent–child communication was poor. Parent–child communication about controversial topics such as marijuana may be especially challenging in Latino families because of the cultural expectation of *respeto*—respect for parents and other authority figures (Raffaelli & Ontai, 2004). Although *respeto* typically refers to obedience, apologetic manners and increased attention while interacting with older family members, the formality surrounding this value could potentially create an environment in which adolescents feel uncomfortable admitting undesirable behaviors such as drug use. Thus, Latino adolescents might avoid conversation of this topic altogether with parents, to steer away from any conflict that may arise.

Family interventions that encourage open communication about all topics, including those that are sensitive or difficult to discuss, may be useful in preventing marijuana use among Latino boys. Previous research (Pantin et al., 2009) has demonstrated that culturally relevant programs that teach parenting skills and knowledge can prevent substance use and HIV-risk behaviors among Latino adolescents. Parents and adolescents in Latino families typically have similar goals for their relationship—to be loved, understood, and respected despite generational differences in values and experiences (Wagner et al., 2008). However, parents and adolescents may need to learn more effective techniques for promoting open communication about controversial topics such as drug use (Buzi et al., 2009; Fasula & Miller, 2006). In an unfamiliar and often threatening cultural environment, Latino parents may attempt to protect their children from danger by engaging in “protective parenting”—monitoring their whereabouts, searching their rooms and backpacks, and using other controlling techniques to limit their autonomy (Domenech Rodríguez et al., 2009; Wagner et al., 2008). Adolescents growing up in the US culture might respond better to parenting

practices that emphasize joint decision-making and open communication. When parent–child communication is strong, boys may feel comfortable discussing their problems with their parents, which might make them less likely to seek out other confidants outside the family such as peers and strangers, who may offer them marijuana.

This study also extends the previous literature on differences in child-rearing practices for boys and girls. In cultures with differentiated gender roles, parents may use different parenting practices with their sons and daughters. Latino parents typically report that they give their sons more autonomy than their daughters (Guilamo-Ramos et al., 2007; Raffaelli & Ontai, 2004); sons are expected to learn to be self-sufficient and confident in the outside world to fulfill the machismo role, whereas daughters are expected to stay home and help with household chores to fulfill the Marianismo role and because they are more vulnerable outside (to pregnancy, rape, etc.). The results of this study are consistent with this conceptualization of gender-specific parenting: marijuana use may be low among Latino girls because they have few opportunities to affiliate with drug-using peers in unsupervised settings, whereas boys may have ample opportunities to spend time with peers without adult supervision. Boys who are experiencing communication problems with their parents may seek out other people as confidants, and these people may expose them to opportunities to experiment with drugs.

Our results contribute further to these findings, and show that boys, compared with girls, reported that they were monitored less frequently, communicated less with their parents, and espoused lower notions of familism. These three family differences did not, in turn, translate into differences in feelings of family cohesiveness between boys and girls. Taken together, the implication is that although Latino parents, for cultural reasons, may follow a more laissez-faire approach in the rearing of their sons (as evidenced by lower scores on parental monitoring and parental communication), their sons do not perceive weaker family cohesiveness, or emotional connectedness, than their daughters. Future research may seek to investigate the cultural values and processes that contribute to such gender-based differences in the perception of family.

Study's Limitations

Results should be interpreted in the light of several limitations of the study. While the longitudinal data in the current study can offer some support for a causal pathway, only a study with a true experimental design could offer definitive evidence for causation. However, given the obvious ethical implications of manipulating independent variables such as those included in the current study, such experimental designs are generally unfeasible. Furthermore, based on comparisons of demographic, family, and substance use variables, those retained in our analytic sample tended to be at lower risk than respondents who were lost at follow-up. These results may not generalize to the students who were lost to attrition or to students living in different geographic areas. The family functioning measures used here were gathered only as child self-report. Considering that children are most cognizant of their own behaviors and attitudes, having youth report on their own activities is perhaps the most valid indicator of how they view and interpret the dynamics in their family. In future studies, parental corroboration of family functioning characteristics will be an important validation check and will provide a more holistic picture of the family environment. The marijuana use measures were also based on self-reports, which may be biased. However, previous studies have found that under confidential survey conditions, adolescents' self-reports of lifetime marijuana use are typically quite accurate and reliable (Bailey, Flewelling, & Rachal, 1992; Shillington & Clapp, 2000).

In the few investigations concurrently examining gender differences and family dynamics involving Latino adolescents, permissiveness to allow the child to go out was predictive of

marijuana use in both boys and girls (Parsai et al., 2009; Voisine, Parsai, Marsiglia, Kulis, & Nieri, 2008). As such, other parenting factors not examined in our study might prove to be more effective in mitigating the use of this drug. Though the present research found that the parental factors were more predictive than peer norms, it is plausible that closeness of friendships to those who furnish this substance, as well as accessibility of this substance, may prove more explanatory. Consistent with adolescent usage patterns, mean marijuana usage scores were relatively low, especially for females, and thus the conclusions drawn from this study may represent initiation and experimentation behaviors, rather than habitual usage.

Previous work has argued that, particularly among Latino adolescents, the role of the larger family and other influential individuals living in the household, such as grandparents and older siblings, should be considered in an assessment of family structure (Wagner et al., 2008). The measures of family functioning used in the current model predominantly refer to relationships with parents. Future studies would benefit from including measures of relationships with the extended family, including siblings, grandparents, aunts, uncles, and unrelated people living in the household. The peer norms variable used in this research was operationally defined in terms of descriptive norms, but assessing the contribution of injunctive norms toward this substance would warrant further investigation (Neighbors, Geisner, & Lee, 2008). As our sample consisted of mostly Latino adolescents who were born in the United States (88.4%), subsequent investigations may seek to replicate these results in a less acculturated sample.

Future research, in addition, should examine how parental communication may be different between boys and girls, based on the gender of the parent. Boys might communicate more easily with their fathers, whereas girls might communicate more easily with their mothers. Therefore, gender of the parent, too, might interact and therefore facilitate, or even hinder, parent–child communication. For example, a study of an ethnically diverse sample of adolescents (Luk, Farhat, Iannotti, & Simons-Morton, 2010) found that communication with the father, but not with the mother, was protective against marijuana use among boys, but parental communication was not associated with girls' marijuana use.

Another direction for future research is to determine whether these parenting factors have different effects depending on the type of drug or substance. In California, non-medical marijuana use is illegal, whereas the use of other substances such as tobacco and alcohol is legal for adults but not for minors. It is not known whether the legality of the substance influences parent–child communication about various substances. Future research should investigate how Hispanic families communicate about various substances, especially those that may be used legally by the adults in the family.

CONCLUSION

In conclusion, these results indicate that family plays an integral part in the lives of Latino adolescents, and that effective parent–child communication may prevent marijuana use especially among boys. Unfortunately, few prevention programs are targeted toward reducing marijuana use specifically in Latino adolescents (Nsimba, 2007). Addressing this concern, our research should shed light on important parental and family practices, perhaps offering valuable information that may be targeted in prevention efforts tailored to Latino families, and may assist in the endeavor of reducing the perilous national rates of marijuana experimentation during adolescence.

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FIGURE 1.
Parental communication predicting marijuana use as moderated by adolescent gender
(controlling for all other predictors in the regression).

TABLE 1

Correlation matrix of variables

Variable	1	2	3	4	5	6	7	8	9	10
1. Gender	—									
2. Age	.04	—								
3. US born	-.04	-.05	—							
4. Peer marijuana norms	.12***	.05	.01	—						
5. Parental monitoring	-.20***	-.04	-.01	-.06*	—					
6. Parental communication	-.11***	-.01	-.01	-.07**	.35***	—				
7. Family cohesion	-.01	-.05	-.03	-.14**	.29***	.45***	—			
8. Familism	-.11***	-.06*	.06*	-.02**	.25***	.23***	.35***	—		
9. T1 Marijuana use	.03	.03	.01	.28***	-.23***	-.16***	-.18***	-.08**	—	
10. T2 Marijuana use	.12***	.01	.01	.16***	-.24***	-.21***	-.22***	-.09***	.48***	—

*
 $p < .05$;**
 $p < .01$;***
 $p < .001$.

TABLE 2

Mean differences as a function of gender

Measure	Boys		Girls		<i>t</i> -test	Cohen's <i>d</i>
	Mean	SD	Mean	SD		
Peer marijuana norms	4.86	3.11	5.61	3.15	4.33 [*]	0.24
Parental monitoring	3.55	0.48	3.73	0.38	7.62 [*]	0.42
Parental communication	2.39	0.74	2.56	0.83	4.17 [*]	0.22
Family cohesion	3.53	0.57	3.55	0.69	0.43	0.02
Familism	3.28	0.61	3.41	0.53	4.14 [*]	0.23
T1 Marijuana use	1.48	1.20	1.41	1.05	-1.25	0.06
T2 Marijuana use	2.15	1.73	1.76	1.39	-4.42 [*]	0.25

*
 $p < .001$.

TABLE 3

Hierarchical multiple regression predicting T2 marijuana use

	<i>R</i> ² change	Beta		
		Step 1	Step 2	Step 3
Step 1: Covariates	.24 ***			
Gender		.11 ***	.09 ***	.09 ***
Age		-.01	-.01	-.01
US born		.01	.00	.00
Peer marijuana norms		.04	.03	.03
T1 marijuana use		.46 ***	.43 ***	.43 ***
Step 2: Familial	.03 ***			
Parental monitoring			-.07 **	-.06 *
Parental communication			-.06 *	-.07 **
Family cohesion			-.11 ***	-.12 ***
Familism			.03	.03
Step 3: Interactions	.01 *			
Gender × parental monitoring				-.01
Gender × parental communication				-.06 *
Gender × family cohesion				-.04
Gender × familism				.01

Note. Beta weights represent standardized coefficients.

*
p < .05;

**
p < .01.

p < .001.