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# THE MODERATING EFFECTS OF ETHNIC IDENTIFICATION ON THE RELATIONSHIP BETWEEN PARENTAL MONITORING AND SUBSTANCE USE IN MEXICAN HERITAGE ADOLESCENTS IN THE SOUTHWEST UNITED STATES

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# Abstract

The purpose of this study was to assess the combined effects of ethnic identification and perceived parental monitoring on the substance use of a sample of 162 male and 192 female Mexican heritage seventh grade adolescents. Parental monitoring predicted lower risk for substance use. An interaction of ethnic identification by parental monitoring was observed with parental monitoring exhibiting stronger effects in decreasing use of alcohol use among boys who scored low on ethnic identification. For girls, decreased substance use was predicted by stronger parental monitoring coupled with high ethnic identification. Results are discussed in terms of how the youth's ethnic identification is a distinct process from acculturation, and how ethnic identification may operate as an added protective factor in conjunction with parental monitoring, as protective factors against adolescent substance abuse.

# INTRODUCTION

Latino adolescents are at high risk for substance use and abuse, with Latinos reporting the highest rates of substance use in almost all classes of licit and illicit drugs compared to non-Hispanic Whites and African Americans (Johnston, O'Malley, Bachman, & Schulenberg, 2009). In a recent national survey, Latino eighth grade students reported a 21.5% alcohol use rate in the past year, compared to non-Hispanic Whites' use rate of 15.2% (Johnston et al., 2009). The reported marijuana and inhalant use rates by Latino eighth grade students were 13.2% and 10.2%, respectively, compared to the reported use by non-Hispanic Whites of 9.6% and 8.5%, respectively. Cigarette use was the only class of substances for which Latino students reported slightly lower use rates (7.0%) compared to non-Hispanic Whites (7.2%). It should be noted that compared to their counterparts in Mexico, Mexican-heritage adolescents living in the United States report higher ever use substance rates. Adolescents between the ages of 12 to 17 years in Mexico City reported a 5% rate of ever using illicit drugs (Benjet et al., 2007) compared to 20.9% among Mexican heritage adolescents in the eighth grade (Delva et al., 2005).

Latino adolescents constitute a very heterogeneous group. The umbrella term, Latino (or Hispanic) is a label that encompasses youths of different national origins, levels of acculturation, socioeconomic status, migration history and many other contextual factors, such as place of the residence within the United States (Berry, 2006; Marsiglia, Parsai, &

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Kulis, 2009; Portes & Rumbaut, 2001). When national origin is considered, Mexicanheritage youth constitute the largest Latino subgroup. Although they reside all over the nation, they are predominantly located within the Southwest United States (U.S. Census Bureau, 2000).

#### Influences of Ethnic Identification

For Mexican heritage adolescents, ethnic identification is an important process that may moderate the effects of other known factors that influence the onset and extent of substance use and abuse (Marsiglia, Kulis, Hecht, & Sills, 2004; Ndiaye, Hecht, Wagstaff, & Elek, 2009). Other change processes, such as migration and acculturation, have also received much attention in the literaure as possibly affecting the attitudes and behaviors of Mexican immigrants toward alcohol and other drugs (Caetano & Clark, 2003; Lara, Gamboa, Kahramanian, Morales, & Hayes Bautista, 2005). Although previous research has considered the effects of parenting behaviors on youth problem behaviors in the context of acculturation, theorists have pointed out that ethnic identity and identification are distinct processes from those of acculturation (Schwartz, Ungar, Zamboanga, & Szapocznik, 2010). Here we report the results of a study of Mexican heritage adolescents' perceptions of their parents' monitoring of the youth's behaviors, and the related impact of this monitoring on these youths' substance use. The present study is guided by the general hypothesis among Mexican heritage adolescents that a youth's greater ethnic identification with their own culture of origin (ethnic identification) and greater monitoring of their behaviors by their parents (parental monitoring) will predict lower substance use rates.

### **Parental Monitoring and Substance Use**

Parental monitoring is defined as the frequency of supervision and consistency of discipline, which has been linked to the reduction of drug use among Mexican heritage adolescents (Voisine, Parsai, Marsiglia, Kulis, & Nieri, 2008). Parents who effectively monitor their adolescents have children who are at lower risk of smoking, drinking, and using illegal substances (Tobler & Komro, 2010), and adolescents who report high parental monitoring have significantly lower odds of lifetime drug use (Benjet et al., 2007). On the other hand, when parents provide less parental monitoring and engage in a permissive parenting style, their children report higher rates of substance use and antisocial behaviors (Parsai, Marsiglia, & Kulis, 2010; Wood, Mitchell, Read, & Brand, 2004). Lower parental monitoring has also been linked to poor adolescent development of self-control to cope with personal issues (Berzonsky, 2004), which can lead to higher rates of substance use (Barnes, Reifman, Farrell, & Dintcheff, 2000).

Since cultural factors influence personality, behaviors, and patterns of social interaction, researchers have examined ethnic factors and between group differences in parenting styles and monitoring behaviors (Voisine et al., 2008; Windle et al., 2010). The meaning and effects of parental influences, such as parental monitoring and parental permissiveness, may differ across ethnic groups because these parental practices are shaped by culture-specific norms and by ecological factors, such as the process of acculturation (Voisine et al., 2008). This is of particular relevance in the Southwest, a region that has a strong historical link to Mexico. In Mexican and Mexican American families, researchers have identified *familismo* or family affiliation and bonding as a core cultural value that may exert a potent protective effect against youth substance use (Marsiglia et al., 2009; Marsiglia & Waller, 2002). The protective influences of family-centeredness and *familismo* include support, counseling, advice giving, modeling of prosocial behaviors, and a close monitoring of the children's activities and relationships. *Familismo* can thus be regarded as a culturally specific protective factor, and may well buffer the effects of acculturation stress as experienced by

many Mexican-origin adolescents (Balls Organista, Organista, & Kurasaki, 2003; Marsiglia & Waller, 2002).

## Ethnic Identification and Substance Use

Social identity theory (Tajfel & Turner, 1986) concludes that an individual attributes value to and gains self-esteem from a sense of belonging to a particular social group (Phinney, Romero, Nava, & Huang, 2001; Roberts et al., 1999). The gaining of self-esteem and group membership may serve as protective factors against substance use. Ethnic identification is important in understanding the ways in which ethnic group membership might increase or decrease the vulnerability of youth to engage in both emotional and behavioral problems, such as substance use (Roberts et al., 1999).

In understanding the relationships among parental monitoring, ethnic identification, and substance use, it is important to differentiate between ethnic identification and acculturation (Matsunaga, Hecht, Elek, & Ndiaye, 2010). Acculturation has been defined as an ongoing process through which people from one culture adjust to another culture, modifying their attitudes and their behaviors as a result of the contact with the new culture (Berry, 2006). Ethnic identification is complex, dynamic, and multilayered (Portes & Rumbaut, 2001) and has been defined as the extent to which individuals identify with and adopt the attitudes and values of a particular ethnic group, and furthermore, the extent to which they feel a desire to belong to that ethnic group (Phinney et al., 2001). Moreover, ethnic identification plays a significant role in judgments, decision making, and a wide range of other behaviors (Oyserman, Coon, & Kemmelmeier, 2002). This occurs throughout youth development and is influenced by both family and community contexts (Portes & Rumbaut, 2001).

Multicultural communities, such as border communities in Southwestern cities in the United States, encourage ethnic identification among members of their group. In this approach, contact with a different ethnic culture helps individuals to highlight the experiences involved in having an ethnicity different from that of the dominant culture, and this contrast effect may aid in helping ethnic youths identify more effectively with their own ethnic group (Berry, 2006). Bosma and Kunnen (2001) suggest that ethnic identity is likely to be fostered when individuals grow to recognize that the surrounding society's beliefs, values, and norms are discordant with their own. Viewed in this way, youth ethnic identity development and identification with their ethnic group would be expected to result in a greater adherence to the values of the originating culture and as an additional source of self-esteem in opposition to the forces of acculturation. Adhering to more prosocial cultural values (whether in accord with native cultural norms, or mainstream culture norms, or both) and possessing greater self-esteem may be expected to operate as deterrents or protective factors against delinquent and antisocial behaviors. Strong ethnic identification, despite pressures to assimilate into the dominant culture, may reflect a bicultural strategy and identity for adapting well to the acculturative demands of the dominant culture. Studies have found that Mexican American adolescents who adopt a bicultural orientation and related ethnic self-esteem tend to have lower risks for problem behaviors and substance use compared to those who adopt an assimilationist orientation (Castro, Stein, & Bentler, 2009; Marsiglia et al., 2009; Sullivan et al., 2007).

Ethnic identification has been shown to be a protective factor against substance use. Ndiaye et al. (2009) examined the relationship between ethnic identification and substance use for a large sample of Mexican-heritage adolescents and found that ethnic identification may play a protective role, with stronger ethnic identification related to more antidrug norms, less positive drug expectations, stronger refusal efficacy, and less intent to use substances. Gender did not significantly moderate the relationships between ethnic identification and antisubstance use norms, but these relationships were stronger for Mexican-born than U.S.-

born participants. A study of Mexican American adolescents similarly found that positive ethnic identity (i.e., strong ethnic identification, attachment, and pride) was associated with less substance use and stronger antidrug norms (Marsiglia et al., 2004). Similarly, in a structural equations model, Castro et al. (2009) examined how ethnic pride among Latino middle school boys and girls was protective against the use of alcohol and cigarettes.

### Parental Monitoring, Ethnic Identification and Substance Use

Traditional families of Mexican heritage tend to emphasize and practice *familismo*. Children usually settle close to their parents after marriage, such that within a local community, the extended family forms a family-based neighborhood that supports each other (Castro et al., 2007). Along with the assistance of extended family members, parental monitoring of their childrens' daily activities often acts as a protective mechanism against youth substance use. Among Mexican-heritage preadolescents, these factors appear to promote a sense of ethnic pride throughout these youths' ethnic identity development, which may in turn protect against the use of prohibited or illegal substances, i.e., alcohol, tobacco, illegal drugs (Ndiaye et al., 2009). Specific conservative cultural norms, such as strong family ties and expectations (Gil, Wagner, & Vega, 2000), observed within Latino cultures, may exert protective effects based on normative expectations of responsibility to the family coupled with restrictive norms that discourage substance use (Castro et al., 2007), especially among girls.

In addition, boys and girls may be socialized to different gender role expectations within a traditional Mexican family (Kulis, Marsiglia, Lingard, Nieri, & Nagoshi, 2008; Kulis, Marsiglia, & Nagoshi, 2010). Boys are expected to conform to standards of *machismo*, in which males are given greater social freedom, yet the sense of responsibility and accountability are instilled at a young age. In contrast, girls may be expected to conform to the standards of *marianismo*, in which a female's primary obligation is to the family, and parents often keep girls closer to home. Researchers (Kulis et al., 2010; Voisine et al., 2008) have suggested that the negative aspects of *machismo* could lead to more exposure to substance use, especially alcohol. In Mexico, as in other countries influenced by Mediterranean culture, drinking alcohol has less of a stigma among men than among women (Medina-Mora & Rojas Guiot, 2003). According to Voisine et al. (2008), parental monitoring may be a less crucial determinant of boys' exposure to substance use offers due to a greater degree of social freedom allowed for boys. On the other hand, girls are more at risk for substance use when they experience greater parent permissiveness, in contrast to the conservative and restrictive culture-based gender norm of *marianismo*.

It might thus be expected that the effects of parental monitoring on substance use in Mexican American adolescents may be mediated by ethnic identification, where greater parental monitoring within traditional Mexican cultural values increases ethnic identification, which in turn may decrease substance use through the adolescents' adherence to more prosocial cultural values or as the result of their higher levels of self-esteem. Conversely, it may be proposed that the effects of ethnic identification on substance use may be mediated by parental monitoring, where youth acceptance of and adherence to traditional Mexican cultural values may precede a traditional family's use of parental monitoring, which in turn may discourage youth substance use. Studies of Mexican adolescents, however, have found no support for mediating relationships involving acculturation and parental monitoring on substance use (Pokhrel, Unger, Wagner, Ritt-Olson, & Sussman, 2008; Ramirez et al., 2004). Previous research may not have identified mediating effects of parental monitoring on the acculturation-substance abuse relationship because levels of acculturation may instead act as a moderator, i.e., a conditional effect, on the effect of parental monitoring on substance use. The reasoning here is that the protective effects of familismo-based parental monitoring for reducing the likelihood of youth substance use may

only operate for very traditional adolescents, those who adhere strongly to values of *familismo*, i.e., those low in acculturation and/or high in ethnic identification.

## Hypotheses

For the present study with Mexican heritage adolescents, it is expected that greater youth ethnic identification with their culture of origin and greater parental monitoring will operate in synergy and produce a significant interaction effect in predicting lower levels of youth substance use. It is hypothesized that levels of ethnic identification may moderate the effect of parental monitoring on youth substance use, such that parental monitoring is expected to be more effective (predicting lower levels of youth substance use) when ethnic identification is high and when the adolescent is committed to traditional values of *familismo*. Based on previous research, gender differences in these predicted effects are also hypothesized (Kulis et al., 2010). Given the traditional emphasis on *familismo* particularly for Mexican girls (Voisine et al., 2008), it was expected that parental monitoring effects on substance use would be strongest for girls scoring high in ethnic identification.

# METHOD

#### Sample

The data analyzed here come from a longitudinal study of the effectiveness of a Parent Education supplement to a established model program called keepin' it REAL (Marsiglia & Hecht, 2005), a primary prevention intervention for adolescent substance use. Data for the present analyses come from the preintervention Wave 1 assessment of 388 (189 boys, 204 girls, 3 missing gender) seventh grade participants recruited from nine local Phoenix area schools from two school districts with heavily Mexican and Mexican American populations. Analyses are presented for those 347 participants (162 boys, 182 girls, 3 missing gender) who indicated their ethnicity as being Mexican, Mexican American, or other Latino. The mean age of this sample was 12.25 years (SD = .50) at the time of initial testing in the fall semester of seventh grade.

#### Measures

Substance use was measured by four questions asking about any lifetime use of alcohol, cigarettes, marijuana, or inhalants, where zero indicates no use and 1 indicates at least one occasion of use.

Control variables included age, school grades, and whether the student was receiving the Federal school lunch program.

Ethnic identification was measured by a 6-item scale ( $\alpha = .76$  for the present sample) adapted from the Multigroup Ethnic Identity Measure (MEIM) by Phinney (1992). Example items included "I have tried to learn more about my own ethnic group, such as its history and customs" and "I feel like I really belong to my own ethnic group." Items were responded to on a 4-point dimension ranging from 1 = strongly agree to 4 = strongly *disagree*, with scale scores being the mean across the items reverse-coded, so that higher scores represent a greater level of ethnic identification.

Parental monitoring was a measured by a 5-item scale ( $\alpha = .79$  for the present sample) adapted from Kerr and Stattin (2000) that asks about whether parents know what the child is doing in their free time and after school, who their friends are, where they're going when they leave the house, and what time they'll be back. Items were responded to on a 4-point dimension ranging from 1 = always to 4 = never, with scale scores being the mean across the items reverse-coded, so that higher scores represent more parental monitoring.

# Analyses

Hierarchical multiple regression analyses were performed to predict the outcome measure of interest, the lifetime use of any of four substances: alcohol, cigarettes, marijuana, or inhalants. Regression models were examined separately by gender. The first block of the model included the control variables, the second block added ethnic identification, the third block entered parental monitoring, and the final block entered the interaction of ethnic identification by parental monitoring. The interaction term was computed by centering the ethnic identification and parental monitoring scores and then multiplying the centered terms (Aiken & West, 1991).

# RESULTS

For the ever used substances variables, 40.1% of the sample reported having used alcohol, 10.4% had used cigarettes, 10.1% had used marijuana, and 8.1% had used inhalants.

Table 1 presents the means and standard deviations for the control variables, ethnic identification, parental monitoring, and ever use of alcohol, cigarettes, marijuana, or inhalants separately by gender. There were no significant gender differences on these variables.

The correlation between ethnic identification and parental monitoring was .24 (p < .01) for boys, but only .06 (not significant) for girls. Table 2 presents the correlations of ethnic identification and parental monitoring with the substance use measures separately by gender. In general, ethnic identification was uncorrelated with substance use, whereas parental monitoring was consistently significantly negatively correlated with substance use for both boys and girls.

Table 3 presents the hierarchical multiple regression results for ever use of alcohol, cigarettes, marijuana, or inhalants for the four-block model including (a) control variables (not reported in the table, but included in the analyses), (b) ethnic identification, (c) parental monitoring, and (d) the interaction of ethnic identification measure by parental monitoring separately for boys and girls. In general, the main effects for ethnic identification and parental monitoring were not affected by the addition of the interaction terms, so the regression coefficients for the full model are presented. In general, ethnic identification did not predict substance use, whereas greater parental monitoring significantly predicted lower substance use over and above the control variables and ethnic identification for most of the substance use variables for both boys and girls. For boys, there was a near-significant interaction of ethnic identification by parental monitoring for lifetime use of marijuana,  $R^2$ change = .02, F(1, 140) = 2.94, p < .09; standardized regression coefficients for low and high ethnic identification groups were -.33 and .02, respectively, indicating that the negative correlation between parental monitoring and marijuana use was greatest in boys with the lowest ethnic identification scores (Fig. 1). For girls, there was a near-significant interaction of ethnic identification by parental monitoring for ever use of cigarettes,  $R^2$ change = .02, F(1, 154) = 3.24, p < .08; betas for low and high ethnic identification groups were .03 and -.23, respectively, and a significant interaction of ethnic identification by parental monitoring for ever use of inhalants,  $R^2$  change = .02, F(1, 154) = 4.15, p < .05; betas for low and high ethnic identification groups were -.24 and -.49, respectively, indicating that parental monitoring effects were most pronounced in reducing cigarette and inhalant use in girls who exhibited the highest ethnic identification scores (Fig. 2).

# DISCUSSION

Acculturation is a multifaceted sociocultural process (Berry, 2006), and the use of multiple measures of acculturation may allow for a more nuanced look at the effects of parental monitoring and different aspects of acculturation. As Bosma and Kunnen (2001) suggest, ethnic identity and identification are fostered when individuals grow to recognize that the surrounding society's beliefs, values, and norms are discordant with their own. Ethnic identification can thus be conceptualized as one of several different responses, including assimilation, that members of immigrant groups can engage in, when coping with pressures to become acculturated and/or to assimilate into the host society. High ethnic identification, despite these pressures, may be indicative of a strategy of active biculturalism, i.e., the ability to move between two cultures.

Bicultural adolescents seem to be more protected against problem behaviors (Marsiglia et al., 2009). Previous studies suggest that individuals that are able to adapt to two distinct cultures and can easily move from one culture to the other can benefit from both (Feliciano, 2001; Ramirez, 1991). From a family resiliency perspective, biculturalism appears to enable youth to retain the protective factors that come from family and culture of origin at the same time that they incorporate aspects of the host culture that help them and their families to better function within their new environment. Sullivan et al. (2007) also found that "integrated" adolescents, those who are bicultural and thus who both maintain heritage culture practices and adopt receiving culture practices, reported the highest levels of parental involvement, positive parenting, and family support. By contrast, assimilated adolescents, those who adopt receiving-culture practices and do not retain heritage culture practices, reported the greatest levels of aggressive behavior. These studies suggest that ethnic identification may be an important factor in the maintenance of bicultural/integrated ethnic identities, particularly as one's generational status becomes farther removed from one's culture of origin.

The effects of ethnic identification on decreasing the risk of problem behaviors, however, may work through various and distinct mechanisms. In contrast to Ndiaye et al. (2009), in the present study ethnic identification was not found to be correlated with levels of lifetime substance use. Although as noted above, ethnic identification is not the same as acculturation, the present findings are consistent with Pokhrel et al.'s (2008) and Ramirez et al.'s (2004) findings that significant correlations of greater parental monitoring with lower substance use, among both Mexican American adolescent boys and girls, were largely independent of the effects of acculturation. As expected, ethnic identification was positively correlated with parental monitoring for boys, but unexpectedly, it was uncorrelated with parental monitoring for girls.

The significant and near-significant interactions of ethnic identity by parental monitoring on substance use in girls were such that parental monitoring effects on substance use were zero for girls scoring the lowest in ethnic identification but were substantial for girls scoring the highest in ethnic identification. This pattern of results is consistent with the idea that ethnic identification in Mexican American girls fosters an adherence to traditional values of *familismo* that strengthens the effects of family processes that reduce substance use. In contrast, parental monitoring effects on marijuana use were strongest for boys scoring the lowest in ethnic identification and were essentially zero for boys under traditional values of *machismo* (Voisine et al., 2008), high ethnic identification here may act to attenuate parental influences.

The present findings emphasize the importance of considering gender differences in understanding the relationship of acculturation and acculturation-related variables, such as ethnic identification, to substance use in Hispanic adolescents (Kulis et al., 2010). Gender differences may be due to the tendency of parents to be more protective of girls, keeping them closer to home, which could lead them to identify more closely with labels reflective of Mexican descent (Holley et al., 2009; Suarez- Orozco, 2001). Family traditionalism reflects a cultural orientation that emphasizes adherence to conservative familial lifestyles, including the acceptance of prescribed gender roles and expectations (Castro et al., 2009; Cuadrado & Lieberman, 1998) such as *machismo* and *marianismo*. For immigrants, traditionalism may involve adherence to values and norms consistent with the migrant's native country and/or ancestral heritage (Castro & Coe, 2007; Ramirez, 1991).

In terms of interventions for substance use in Mexican American adolescents, acculturation needs to be addressed by promoting prosocial bonding with the adolescent's parents, as well as with American schools and other social institutions, as strategies for adaptive acculturation into mainstream American society (Berry, 2006; Castro et al., 2009; Lara et al., 2005). Such strategies encourage a retention of links with Latino culture under a bicultural approach to Latino youth development (Benet-Martínez & Haritatos, 2005). For these adolescents, capabilities for developing ethnic identity and ethnic pride, self-efficacy for avoiding risk behaviors, and for emotional self-regulation are complex tasks that are best negotiated with the guidance and support of their parents (Pantin et al., 2003). Ethnic pride among Latino adolescents may operate as a culturally specific form of self-efficacy enhancement (Castro et al., 2009). As a form of personal agency, strong ethnic pride may constitute a source of personal strength, dignity and self-respect, which could aid in refusal skills to resist or deflect pressures that are imposed by others to engage in substance use.

#### 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. Future research should include a larger sample size, as well as a longitudinal design that allows for inferences of causation to be made and provides the ability to see if the moderating effects of ethnic identification by parental monitoring change over time. Time in the United States, which has been shown to decrease amounts of parental monitoring, as the adolescent adopts more American values, needs to be considered. Future research should also look at the interactions of ethnic identification with other facets of acculturation, such as language use, generation status, and acculturation stress.

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# References

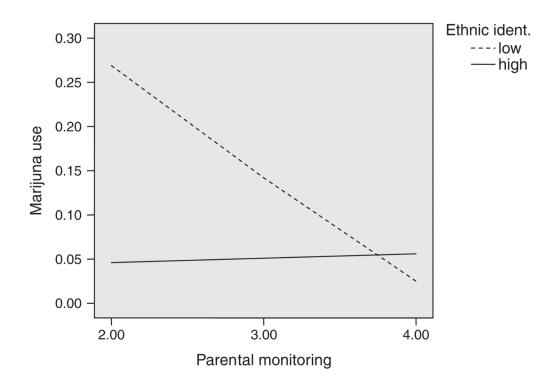
- Aiken, LS.; West, SG. Multiple regression: Testing and interpreting interactions. Newbury Park, CA: Sage; 1991.
- Balls Organista, P.; Organista, KC.; Kurasaki, K. Acculturation among ethnic minority families. In: Chun, KM.; Balls Organista, P.; Marin, G., editors. Acculturation: Advances in theory, measurement, and applied research. Washington, DC: American Psychological Association; 2003. p. 95-119.

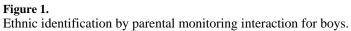
- Barnes GM, Reifman A, Farrell MP, Dintcheff B. The effects of parenting on the development of adolescent alcohol misuse: A six-wave latent growth model. Journal of Marriage and the Family. 2000; 62:175–186.
- Benet-Martínez V, Haritatos T. Bicultural identity integration (BII): Components and psychosocial antecedents. Journal of Personality. 2005; 73:1015–1050. [PubMed: 15958143]
- Benjet C, Borges G, Medina-Mora ME, Fleiz C, Blanco J. Prevalence and sociodemographic correlates of drug use among adolescents: Results from the Mexican Adolescent Mental Health Survey. Addiction. 2007; 102:1261–1268. [PubMed: 17624976]
- Berry, JW. Immigrant youth in cultural transition: Acculturation, identity, and adaptation across national contexts. Mahwah, NJ: Erlbaum; 2006.
- Berzonsky MD. Identity style, parental authority, and identity commitment. Journal of Youth and Adolescence. 2004; 33:213–220.
- Bosma HA, Kunnen ES. Determinants and mechanisms in ego identity development: A review and synthesis. Developmental Review. 2001; 21:39–66.
- Caetano, R.; Clark, CL. Acculturation, alcohol consumption, smoking, and drug use among Hispanics. In: Chun, KM.; Organista, PB.; Marin, G., editors. Acculturation: Advances in theory, measurement, and applied research. Washington, DC: American Psychological Association; 2003. p. 223-239.
- Castro FG, Coe K. Traditions and alcohol use: A mixed-methods analysis. Cultural Diversity & Ethnic Minority Psychology. 2007; 13:269–284. [PubMed: 17967095]
- Castro FG, Garfinkle J, Naranjo D, Rollins M, Brook JS, Brook D. Cultural traditions as protective factors among Latino children of illicit drug users. Substance Use and Misuse. 2007; 42:621–642. [PubMed: 17558954]
- Castro FG, Stein JA, Bentler PM. Ethnic pride, traditional family values, and acculturation in early cigarette and alcohol use among Latino adolescents. Journal of Primary Prevention. 2009; 30:265– 292. [PubMed: 19415497]
- Cuadrado M, Lieberman L. Traditionalism in the prevention of substance misuse among Puerto Ricans. Substance Use and Misuse. 1998; 33:2737–2755. [PubMed: 9869441]
- Delva J, Wallace JM, O'Malley PM, Bachman JG, Johnston LD. The epidemiology of alcohol, marijuana, and cocaine use among Mexican American, Puerto Rican, Cuban American, and other Latin American eighth-grade students in the United States: 1991–2002. American Journal of Public Health. 2005; 95:696–702. [PubMed: 15798132]
- Feliciano C. The benefits of biculturalism: Exposure to immigrant culture and dropping out of school among Asian and Latino youths. Social Science Quarterly. 2001; 82(4):865–880.
- Gil A, Wagner E, Vega W. Acculturation, familism and alcohol use among Latino adolescent males: Longitudinal relations. Journal of Community Psychology. 2000; 28:443–458.
- Holley LC, Salas LM, Marsiglia FF, Yabiku ST, Fitzharris B, Jackson KJ. Youths of Mexican descent of the southwest: Exploring differences in ethnic labels. Children Schools. 2009; 31(1):15–26. [PubMed: 19816593]
- Johnston, LD.; O'Malley, PM.; Bachman, JG.; Schulenberg, JE. NIH Publication No. 08-6418. Bethesda, MD: National Institute on Drug Abuse; 2008. Monitoring the future national results on adolescent drug use: Overview of key findings, 2007.
- Kerr M, Stattin H. What parents know, how they know it, and several forms of adolescent adjustment: Further support for a reinterpretation of monitoring. Developmental Psychology. 2000; 36:366– 380. [PubMed: 10830980]
- Kulis S, Marsiglia FF, Lingard EC, Nieri T, Nagoshi J. Gender identity and substance use among students in two high schools in Monterrey, Mexico. Drug Alcohol Dependence. 2008; 95:258–268.
- Kulis S, Marsiglia FF, Nagoshi JL. Gender roles, externalizing behaviors, and substance use among Mexican-American adolescents. Journal of Social Work Practice in the Addictions. 2010; 10:283– 307. [PubMed: 21031145]
- Lara M, Gamboa C, Kahramanian MI, Morales LS, Hayes Bautista DE. Acculturation and Latino health in the United States: A review of the literature and its sociopolitical context. Annual Review of Public Health. 2005; 26:367–397.

- Marsiglia, FF.; Hecht, ML. Keeping' it REAL: An evidence-based program. Santa Cruz, CA: ETR Associates; 2005.
- Marsiglia FF, Kulis S, Hecht ML, Sills S. Ethnicity and ethnic identity as predictors of drug norms and drug use among preadolescents in the US southwest. Substance Use and Misuse. 2004; 39(7): 1061–1094. [PubMed: 15387204]
- Marsiglia FF, Parsai MB, Kulis S. Effects of familism & family cohesion on problem behaviors among adolescents in Mexican immigrant families in the Southwest U.S. Journal of Ethnicity & Cultural Diversity in Social Work. 2009; 18:203–220.
- Marsiglia FF, Waller M. Language preference and drug use among Southwestern Mexican American middle school students. Children & Schools. 2002; 25(3):145–158.
- Matsunaga M, Hecht ML, Elek E, Ndiaye K. Ethnic identity development and acculturation: A longitudinal analysis of Mexican-Heritage youth in the Southwest United States. Journal of Cross-Cultural Psychology. 2010; 41:410–427. [PubMed: 20740051]
- Medina-Mora ME, Rojas Guiot E. Mujer, probeza, y adicciones [Women, poverty, and addictions]. Perinatolgia y Reproduccion Humana. 2003; 17:230–244.
- Ndiaye K, Hecht M, Wagstaff D, Elek E. Ethnic identification and perceptions of substance use. Substance Use & Misuse. 2009; 44:1160–1182. [PubMed: 19938936]
- Oyserman D, Coon HM, Kemmelmeier M. Rethinking individualism and collectivism: Evaluation of theoretical assumptions and meta-analyses. Psychological Bulletin. 2002; 128(1):3–72. [PubMed: 11843547]
- Pantin H, Coatsworth JD, Feaster JD, Newman FL, Briones E, Prado G, et al. Familias Unidas: The efficacy of an intervention to increase parental investment in Hispanic immigrant families. Prevention Science. 2003; 4:189–201. [PubMed: 12940469]
- Parsai M, Marsiglia FF, Kulis S. Parental monitoring, religious involvement and drug use among Latino and Non-Latino youth in the southwestern United States. British Journal of Social Work. 2010; 40:100–114. [PubMed: 20046816]
- Phinney JS. The multigroup ethnic identity measure: A new scale for use with diverse groups. Journal of Adolescent Research. 1992; 7:156–176.
- Phinney JS, Romero I, Nava M, Huang D. The role of language, parents, and peers in ethnic identity among adolescents in immigrant families. Journal of Youth and Adolescence. 2001; 30:135–153.
- Pokhrel P, Unger JB, Wagner KD, Ritt-Olson A, Sussman S. Effects of parental monitoring, parentchild communication and parent's expectation of the child's acculturation on the substance use behaviors of urban Hispanic adolescents. Journal of Ethnicity in Substance Abuse. 2008; 7(2): 200–213. [PubMed: 19042806]
- Portes, A.; Rumbaut, RG. Legacies: The story of the immigrant second generation. Berkeley, CA: University of California Press; 2001.
- Ramirez JR, Crano WD, Quist R, Burgoon M, Alvaro EM, Granpre J. Acculturation, familism, parental monitoring, and knowledge as predictors of marijuana and inhalant use in adolescents. Psychology of Addictive Behaviors. 2004; 18(1):3–11. [PubMed: 15008680]
- Ramirez, M. Psychotherapy and counseling with minorities: A cognitive approach to individual and cultural differences. Elmsford, NY: Pergamon; 1991.
- Roberts RE, Phinney JS, Masse LC, Chen YR, Roberts CR, Romero A. The structure of ethnic identity of young adolescents from diverse ethnocultural groups. Journal of Early Adolescence. 1999; 19(3):301–322.
- Schwartz SJ, Ungar JB, Zamboanga BL, Szapocznik J. Rethinking the concept of acculturation: Implications for theory and research. American Psychologist. 2010; 65:237–251. [PubMed: 20455618]
- Suarez-Orozco, C. Psychocultural factors in the adaptation of immigrant youth. In: Agosín, M., editor. Women, gender, and human rights. Piscataway, NJ: Rutgers University Press; 2001. p. 170-188.
- Sullivan S, Schwartz SJ, Prado G, Huang S, Pantin H, Szapocznik J. A bidimensional model of acculturation for examining differences in family functioning and behavior problems in Hispanic immigrant adolescents. The Journal of Early Adolescence. 2007; 27(4):405–430.
- Tajfel, H.; Turner, J. The social identity theory of intergroup behavior. In: Worchel, S.; Austin, W., editors. Psychology of intergroup relations. Chicago: Nelson-Hall; 1986. p. 7-24.

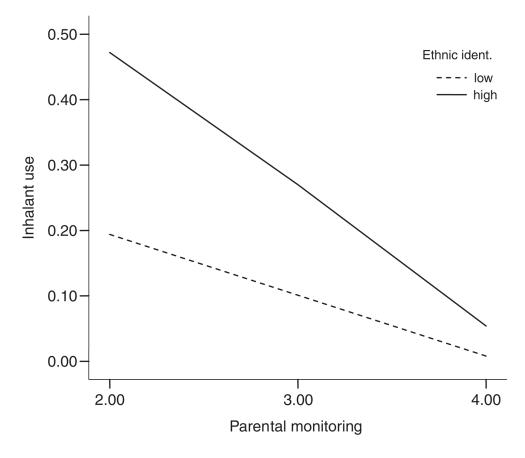
- Tobler AL, Komro KA. Trajectories of parental monitoring and communication and effects on drug use among urban young adolescents. Journal of Adolescent Health. 2010; 46:560–568. [PubMed: 20472213]
- U.S. Census Bureau. The Hispanic population: Census 2000 brief. 2000. Retrieved October 4, 2010, from http://www.census.gov/prod/2001pubs/c2kbr01-3.pdf
- Voisine S, Parsai M, Marsiglia FF, Kulis S, Nieri T. Effects of parental monitoring, permissiveness, and injunctive norms on substance use among Mexican and Mexican American adolescents. Families in Society. 2008; 89(2):264–273. [PubMed: 20668660]
- Windle M, Brener N, Cuccaro P, Dittus P, Kanouse DE, Murray N, et al. Parenting predictors of earlyadolescents' health behaviors: Simultaneous group comparisons across sex and ethnic groups. Journal of Youth and Adolescence. 2010; 39:594–606. [PubMed: 20422349]
- Wood MD, Mitchell RE, Read JP, Brand NH. Do parents still matter? Parent and peer influences on alcohol involvement among recent high school graduates. Psychology of Addictive Behaviors. 2004; 18(1):19–30. [PubMed: 15008682]

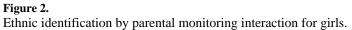
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Table 1

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	Males	les	Females	ales	
Scale	Μ	SD	Μ	SD	t
Age	12.27	0.54	12.22	0.48	0.98
Grades in school	3.17	1.44	3.17	1.63	0.00
School lunch	1.21	0.55	1.24	0.56	-0.39
Ethnic identification	3.18	0.52	3.24	0.46	-1.19
Parental monitoring	3.13	0.72	3.22	0.69	-1.09
Ever use alcohol	0.36	0.48	0.46	0.50	-1.94
Ever use cigarettes	0.13	0.33	0.09	0.29	1.01
Ever use marijuana	0.11	0.31	0.10	0.30	0.12
Ever use inhalants	0.06	0.23	0.11	0.31	-1.72
$_{p < .05;}^{*}$					
$_{p < .01;}^{**}$					
p < .001.					
p < .001.					

## Table 2

Correlations of Ethnic Identification and Parental Monitoring With Substance Use

	Alcohol	Cigarettes	Marijuana	Inhalants
Boys				
Ethnic identification	.06	.09	12	.07
Parental monitoring	21*	.28***	23**	08
Girls				
Ethnic identification	.06	.15	.02	.10
Parental monitoring	23**	15*	19*	35***

\* p < .05;

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

\*\*\* *p* < .001.

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Table 3	and Inhalant Use
	Marijuana,
	Cigarette,
	of Alcohol,
	Regressions c
	rrchical Multiple
	Hiera

$\Lambda R^2$ $\beta$ $\Delta R^2$ $\beta$ .27****         .27****         .00           .27****         .03         .05           .01        03         .13****         .00           .00        03         .01         .11           .00        03         .01         .11           .00        03         .01         .11           .00        03         .01         .11           .00        03         .01         .11           .01         .14*         .02*        05           .01         .14*         .02*        05           .01         .10*         .01         .11*           .02*         .02*        05         .01*           .01         .10*         .01         .14*           .02*         .00         .01         .14*           .02*         .01         .01         .14*           .02*         .01         .01         .10*           .02*         .00         .01         .14*		Alcohol	loi	Cigarettes	sttes	Mari	Marijuana	Inhalants	ants
$06$ $02$ $27^{****}$ $.00$ des in school $05$ $05$ $.08$ $.05$ ool hunch $11$ $.03$ $02$ $.01$ $.03$ $.05$ ool hunch $11$ $.03$ $02$ $.01$ $03$ $.13^{****}$ $.06$ ool hunch $11$ $.03$ $02$ $.01$ $03$ $.13^{****}$ $07$ ool hunch $11$ $.01$ $12$ $.00$ $03$ $.01$ $.11$ ani di by par. mon. $11$ $.01$ $11$ $.01$ $14^{*}$ $.02^{*}$ $07$ $n$ id. by par. mon. $11$ $.01$ $.01$ $.01$ $.01$ $14^{*}$ $.02^{***}$ $07$ $n$ id. by par. mon. $.07$ $.01$ $14^{*}$ $02^{*}$ $16^{****}$ $08^{****}$ $n$ id. by par. mon. $07$ $01$ $10^{*}$ $02^{*}$ $01^{*}$ $16^{*}$ $n$ id. by par. mon. $07$ $01^{*}$ $02^{*}$ $02^{*}$ $02$		ва	$\Delta R^2$	β	$\Delta R^2$	β	$\Delta R^2$	β	$\Delta R^2$
$06$ $02$ $.27^{****}$ $.0$ des in school $05$ $.03$ $.08$ $.05$ des in school $05$ $05$ $.08$ $.05$ ool lunch $11$ $.03$ $.02$ $.01$ $.05$ nic identification $.07$ $.00$ $.12$ $.00$ $.01$ $.11$ nic identification $.07$ $.00$ $.12$ $.00$ $.01$ $.11$ nic identification $.07$ $.00$ $.12$ $.00$ $.11$ $.01$ $.11$ nic identification $.01$ $11$ $.01$ $12$ $07$ $13$ nic identification $.07$ $.01$ $11$ $12$ $12$ $12$ nic identification $.07$ $.01$ $.05$ $12$ $12$ $12$ nic identification $.07$ $.01$ $12$ $12$ $12$ nic identification $.07$ $.02$ $10$ <	Boys								
des in school $05$ $05$ $.08$ $.05$ ool lunch $11$ $.03$ $02$ $.01$ $.07$ $.05$ nic identification $.07$ $.00$ $.12$ $.03$ $.13^{****}$ $07$ nic identification $.07$ $.00$ $.12$ $.00$ $03$ $.01$ $.11$ antal monitoring $23^{***}$ $.04^{**}$ $33^{****}$ $.08^{****}$ $13$ $.01$ $11$ ni dentification $11$ $.01$ $13$ $13^{****}$ $07$ $13$ ni des in school $07$ $11$ $.01$ $11$ $.01$ $14^{*}$ $05^{***}$ $07$ $\circ$ $07$ $14^{*}$ $14^{*}$ $23^{***}$ $14^{*}$ $14^{*}$ $14^{*}$ $\circ$ $14^{*}$ $12^{*}$ $10^{*}$ $12^{*}$ $12^{*}$ $\circ$ $14^{*}$ $14^{*}$ $23^{***}$ $14^{*}$ $23^{***}$ $14^{*}$ $22^{*}$ $16^{*}$ $16^{*}$ $16^{*}$	Age	06		02		.27***		00.	
ool lunch $11$ $03$ $02$ $01$ $03$ $.13^{****}$ $07$ nic identification $.07$ $.00$ $.12$ $.00$ $.01$ $.11$ ental monitoring $23^{***}$ $.04^{**}$ $33^{****}$ $.08^{****}$ $.03^{*}$ $07$ ental monitoring $23^{***}$ $.04^{**}$ $33^{****}$ $.08^{****}$ $13$ $.01$ $13$ ni d. by par. mon. $11$ $.01$ $11$ $.01$ $13^{*}$ $13^{*}$ $13^{*}$ $13^{*}$ $*$ $07$ $11$ $.01$ $11^{*}$ $.01^{*}$ $13^{*}$ $13^{*}$ $*$ $07$ $07$ $01$ $14^{*}$ $02^{*}$ $05^{*}$ $07^{*}$ $*$ $07$ $.01$ $.01$ $.01$ $.01^{*}$ $13^{*}$ $*$ $07$ $.01$ $.01^{*}$ $.01^{*}$ $13^{*}$ $*$ $07$ $.01$ $.01^{*}$	Grades in school	05		05		80.		.05	
nic identification.07.00.12.00 $03$ .01.11ental monitoring $23$ *** $.04^{**}$ $33$ **** $.08^{****}$ $13$ $.03^{**}$ $13$ n id by par. mon. $11$ $.01$ $11$ $.01$ $.14^{*}$ $.02^{*}$ $05$ $\circ$ $07$ $07$ $07$ $.21^{***}$ $07^{*}$ $07^{*}$ $\circ$ $07$ $07$ $01$ $.21^{**}$ $07^{*}$ $\circ$ $.02$ $01$ $.02^{*}$ $12^{***}$ $\circ$ $.03$ $.01$ $.05^{**}$ $12^{***}$ $\circ$ $.07$ $.00$ $.17^{**}$ $.02^{**}$ $.14^{*}$ $\circ$ $.03$ $.01$ $.05^{**}$ $.01$ $.01^{*}$ $.02^{***}$ $\circ$ $.07$ $.00$ $.17^{**}$ $.02^{*}$ $.01$ $.01^{*}$ $\circ$ $.07$ $.01$ $.02^{*}$ $.00$ $.01^{*}$ $14^{*}$ $\circ$ $14^{*}$ $.02^{*}$ $02^{*}$ $.01^{*}$ $16^{*}$ $\circ$ $14^{*}$ $02^{*}$ $02^{*}$ $02^{*}$ $16^{*}$	School lunch	11	.03	02	.01	03	$.13^{****}$	07	.01
ental monitoring $23$ *** $.04$ ** $33$ **** $.08$ **** $.03$ *** $13$ $.03$ *** $13$ n. id. by par. mon. $11$ $.01$ $11$ $.01$ $13$ $.03$ ** $13$ $*$ $07$ $11$ $.01$ $11$ $.01$ $.02^*$ $05$ $*$ $07$ $07$ $07$ $07$ $07$ $07$ $*$ $07$ $07$ $07$ $07$ $07$ $07$ $*$ $07$ $07$ $01$ $.01$ $.05$ $07$ $12^*$ $*$ $07$ $.01$ $.05$ $.01$ $.06$ $.01^*$ $12^*$ $*$ $.07$ $.00$ $.01$ $.02^*$ $.00$ $.01$ $16^*$ $*$ $16^*$ $16^*$ $16^*$ $16^*$ $16^*$ $*$ $16^*$ $16^*$ $16^*$ $16^*$ $16^*$ $*$ $16^*$ $16^*$ $16^*$ $16^*$ $16^*$	Ethnic identification	.07	00.	.12	00.	03	.01	11.	.01
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$ \begin{array}{l c c c c c c c c c c c c c c c c c c c$	Ethn. id. by par. mon.	11	.01	11	.01	.14*	.02*	05	00 <sup>.</sup>
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	Girls								
.02 $01$ $.20^{**}$ $12$ .03       .01       .05       .01       .10 $.14^{*}$ .07       .00 $.17^{**}$ .02*       .10       .10 $23^{***}$ .05^{***} $14^{*}$ .02*       .01       .10 $07$ .01 $14^{*}$ .02* $02$ .01 $15^{****}$	Age	07		07		.21 <sup>***</sup>		07	
.03       .01       .05       .01       .10 $.10^{****}$ $.14^{*}$ .07       .00 $.17^{**}$ .02*       .10       .01       .10 $23^{***}$ .05^{***} $14^{*}$ .02* $09$ .01 $.10^{****}$ $07$ .01 $14^{*}$ .02* $02$ .00 $15^{****}$	Grades in school	.02		01		.20**		12	
.07       .00 $.17^{**}$ .02*       .10       .01       .10 $23^{***}$ $.05^{***}$ $14^{*}$ $.02^{*}$ $09$ $.01$ $42^{****}$ $07$ $.01$ $14^{*}$ $.02^{*}$ $02$ $.00$ $15^{***}$	School lunch	.03	.01	.05	.01	.10	$.10^{****}$	.14*	.04
23 *** .05 ***14 * .02 *09 .0142 **** 07 .0114 * .02 *02 .0015 **	Ethnic identification	.07	00.	.17**	.02*	.10	.01	.10	.01
$07$ .01 $14^{*}$ .02 <sup>*</sup> $02$ .00 $15^{**}$	Parental monitoring	23 ***	.05***	14*	.02*	60'-	.01	42 ****	.16***
	Ethn. id. by par. mon.	07	.01	14*	.02*	02	00.	15**	
	* $p < .10;$								
p < .10;	** <i>p</i> < .05;								
p < .10; p < .05;	p < .01; p < .01;								
p < .10; p < .05; p < .05; p < .01;	****								