

The protective and risk effects of parents and peers on substance use, attitudes and behaviors of Mexican and Mexican American female and male adolescents

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ABSTRACT

This study explores the extent to which parental and peer behaviors and norms may affect substance use, personal anti-drug norms and intentions to use drugs in a group of Mexican heritage preadolescents in the Southwest, and whether these parental and peer influences differ according to gender. Secondary data from a randomized trial of a drug prevention program was used. The sample consisted of 2,733 adolescents. The outcomes were recent alcohol, cigarette, and marijuana use, personal anti-drug norms and intentions to use drugs. In this study, peer variables were more consistently related to the outcomes than parent variables, with the exception of parental injunctive norms which were the most predictive parent factor. Recommendations are provided to further study the protective processes that are maintained through the transition into adolescence and acculturation as a foundation for the design of resiliency-focused prevention interventions.

**Key Words:** parental monitoring, parental permissiveness, injunctive norms, personal anti-drug norms, substance use, peers, Mexican adolescents

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Adolescent substance use in the U.S. is a major concern for parents, behavioral health practitioners, researchers and government policymakers because it places individuals at increased risk for numerous health, legal, and developmental concerns (Substance Abuse and Mental Health Services Administration, 2003; Ellickson, Tucker, & Klein, 2003). Although billions of dollars are spent annually on programs to prevent adolescent substance use, the National Institute on Drug Abuse (2005) reported that while adolescent alcohol and cigarette use has declined, inhalant and non-medical prescription use continue to increase among 8<sup>th</sup> and 12<sup>th</sup> graders. While in the United States the onset for substance use is around 13 years of age (Faden, 2003) some studies have found that children age 12 (Kaplow, Curran & Dodge, 2002) and even children as young as 10 have already initiated substance use (Johnston et al., 2002). This suggests that prevention needs to start during the elementary years. Early use of substances is important because of its consequences later in life so early detection and an examination of substance use linearly may give researchers an insight on different pathways toward use and this knowledge may be applied in a variety of ways, including prevention program development and counseling strategies. In addition there is a need to examine demographic subgroups to identify how substance use pathways differ by gender, ethnicity and age.

Mexican-heritage adolescents, who represent a rapidly growing group in the United States and comprise one quarter to one third of the American Southwest population (American Community Survey Profile 2002, U.S. Census Bureau, 2005), report more substance offers and use than do non-Hispanic White students in the region (Marsiglia, Kulis, Wagstaff, Elek & Dran, 2005). A number of ecological factors have been correlated with substance use among adolescents, including parental monitoring and peer relationships (Schinke, Schwinn, & Cole, 2006; Simons-Morton, 2004; Marsiglia & Waller, 2002; Adamczyk-Robinette, Fletcher, Wright, 2002). To understand the complex dynamics of Mexican adolescents' relationships with their families and peers, it is important to consider the context in which the adolescents live. For example, *familismo*, the Mexican value that emphasizes the centrality of family and kin networks and prioritizes the importance of family interests over those of the individual (Portes & Rumbaut, 2005; Valenzuela, 1999), is considered to protect Mexican adolescents from substance use (Holleran & Waller, 2003; Marsiglia, Miles, Dustman, & Sills, 2002). Yet, this protective factor could be undermined by the

acculturation experience (Portes & Rumbaut, 2005). Differences in acculturation levels between Mexican heritage parents and children may be reflected in differences between parents' values and norms and their children's peers' values and norms. Mexican heritage adolescents may be caught between being eager to conform to the norms of the dominant society and their obligations towards their own family. Family obligations in Mexican culture are inculcated through an emphasis on values such as obedience and *respeto*. While literature about the relative influences of peers and parents is abundant, much of it has focused on youth from the cultural mainstream of the United States. There is a need for studies that are specifically focused on the experiences of Mexican adolescents and their parents, and how gender may play an additional role in the way that adolescents acculturate.

This study utilizes Ecological Risk and Resiliency Theory as a framework for examining the extent to which parental and peer behaviors and norms affect drug use in a group of Mexican heritage female and male adolescents, and whether these parental and peer influences differ according to gender. This research seeks to advance knowledge on the experiences of Mexican heritage adolescents in order to inform the development of culturally grounded interventions promoting the group's resilience to substance use. The hypothesis leading this study is that the substance use attitudes and behaviors of young Mexican students are influenced by parental monitoring and peer relations.

#### *Drug use during adolescence*

Results from the 2005 Monitoring the Future Survey show a decline in adolescents' overall use of cigarettes, marijuana and alcohol compared to previous years. This is the fourth consecutive year that a decline is reported after some years of stability in use (MTF, 2005). However, drug use among adolescents continues to be a problem. Adolescents' self-reports of their previous-month substance use reveal a progressive increase in alcohol, cigarette, and marijuana use as the adolescents move from 8<sup>th</sup> to 12<sup>th</sup> grade. Alcohol is, by far, the substance most commonly used by adolescents: 17 % of 8<sup>th</sup> graders reported drinking in the past month, and the numbers increase to 33% by 10<sup>th</sup> grade and 47% by 12<sup>th</sup> grade.

The timing of adolescents' drug use initiation is also a concern because early drug use places youth at a greater risk of later use and is more harmful than experimentation at a later age (Flory et al., 2004; Patton et al., 2003). A number of family factors,

including parental attitudes toward substance use, have been found to predict initiation into substance use (Wallace & Fisher, 2007). An array of negative consequences are associated with adolescent alcohol use: automobile accidents (Hingson, 1993), earlier onset of sexual activity (Fergusson & Lynskey, 1996), and sexual risk taking (Derman, Cooper, & Agocha, 1998). Other problems include getting into fights and arguments, causing shame to someone, acting bad, missing school, passing out, driving under the influence of alcohol, and neglecting responsibilities (Arata, Stafford, & Tims, 2003). Adolescent substance use has also been linked with suicide, depression and conduct disorders (Brown, Parks, Zimmerman, & Phillips, 2001).

*Ecological Risk and Resilience Theory and Peer influence on adolescence drug use*

Ecological Risk and Resilience theory views individuals as developing within a complex system of relationships and provides a framework to examine factors that may help explain substance use. Friends and peers who use substances may be a risk factor for adolescents. During adolescence peers constitute a source of companionship and intimacy (Buhrmester, 1996) and exert an influence on day-to-day behaviors (Steinberg et al., 1992). As children progress through adolescence, peers become more important (Hartup, 1983).

Peer cluster theory complements well the ecological risk and resilience model because it recognizes that certain basic conditions (such as the environment and individuals' beliefs and values) make a person susceptible to drug involvement or, alternatively, resilient to it (Oetting & Beauvais, 1986). Peer cluster theory suggests that group members affect each other and the association between peers and drug use is direct (Oetting & Beauvais, 1987). Several studies have shown that peer drug use and peer approval of substance use strongly affect adolescents' drug use (Tani, Chavez, & Deffenbacher, 2001; Dielman et al., 1993). As adolescents interact with drug-using friends, they observe and learn attitudes and values that encourage drug use (Mason & Windle, 2001). However, adolescents tend to pick friends who are like themselves and who reflect their family's value system, social status and ethnic background (Garnier & Stein, 2000). Therefore, groups or cliques exercise varying degrees of influence on an adolescents' behavior, and this influence is not independent of other factors (Caldwell & Darling, 1999). In addition to peers and personality, family factors predict adolescent risk for initiation of alcohol use (Brook et al., 1984). Family conflict, low family bonding and

low levels of parental monitoring are all risk factors for adolescents' substance use. As the influence of family bonding progressively declines and the effect of peers' antisocial activities increases, the risk of substance use increases from age 12 to 21 (Guo, Hill, Hawkins, Catalano, & Abbott, 2002).

Adolescents tend to overestimate the prevalence of substance use among their peers; unfortunately, adolescents' beliefs about their peers' acceptance of drug use influence their own substance use behavior (Page, Hammermeister, & Roland, 2002). The misperceived norm concept is the idea that extreme behaviors draw more attention and therefore, shapes adolescents' perceptions and norms, and subsequently, their actions. For example, if a young person believes that everyone in his class smokes, he may view smoking as "not that bad" and therefore, take up smoking himself (Olds & Thombs, 2001). In summary, adolescents' assessment of how common a behavior is among their peers influences their engagement in that behavior. Therefore, providing youths with accurate information about their peers' substance use can reduce their risk of substance use (Haines and Spear, 1996).

*Ecological Risk and Resilience theory and parental monitoring and adolescence drug use*

Parents (and/or guardians) occupy a key place in the adolescents' system of relationships. Their parenting strategies may place the children at risk or may function as protective factors. Parents influence their children by monitoring them, setting behavioral expectations, and instilling values and norms. Parental monitoring has been conceptualized as parent's knowledge of their child's whereabouts and activities (Dishion & McMahon, 1998). Monitoring can be passive or active. However, parental monitoring is often discussed without distinguishing between passive and active strategies. Even though studies have measured monitoring in both ways the separate effects of passive and active strategies have not been examined. Passive monitoring involves simply receiving information from the children about their whereabouts and activities, whether children share the information prompted by the parents' questions or voluntarily (Stattin & Kerr, 2000). Active monitoring requires the direct involvement of the parents in the children's activities, or in seeking information about their youth from other adults (Stattin & Kerr, 2000). Especially during adolescence parents typically engage in passive monitoring relying on their children account of their activities rather than actively watch them (Stattin & Kerr, 2000; Rotenberg, 1995) Passive monitoring provides parents with knowledge of the child's whereabouts,

but it is in essence an activity of the child and not of the parent (Stattin & Kerr, 2000). In active monitoring, parents will go beyond obtaining information from their children to directly asking other informed adults about their adolescents' activities, getting involved in their adolescent's activities and setting clear rules (Waizenhofer, Buchanan & Jackson-Newsom, 2004). In a study that compared ways in which parents obtain knowledge about their children activities, Waizenhofer et al., (2004) argued that parent's knowledge seems to be enhanced by active involvement in the adolescent's life, and parent's knowledge regardless of its source is "a good thing when it comes to adolescent deviance" (p. 11). Past studies have demonstrated the importance of monitoring adolescent's activities. Passive parental monitoring (i.e., children's spontaneous disclosure of information to parents) has been found to be the strongest predictor of children's norm-breaking behavior when compared to active parental monitoring which involves parents' solicitation of information and parental control in the form of rules and boundaries for behavior. Even when no distinction was made between passive or active monitoring some studies suggested that poorly monitored adolescents were at higher risk for substance use and for associating with peers who approve of drug use (Chassin, Pillow, Curran, Molina, & Barrera, 1993). Low parental monitoring is linked to adolescents' choice of deviant friends (Dishion, Capaldi, Spracklen, & Li, 1995) and to adolescents' involvement in delinquent acts (Fridrich & Flannery, 1995).

Active parental monitoring and rule-setting are linked with less substance use and abuse among adolescents (Baumrind, 1991). Even when drug-using peers exert pressure on their friends to use drugs, perceived parental monitoring can dissuade youths from initiating drug use and influence the amount of substances used (Fletcher et al., 1995). In one study, friends' drinking and low parental monitoring predicted advancement to heavier drinking, and parental monitoring was one of the most important elements in deterring heavier drinking by adolescents (Reifman et al., 1998). Comparable results were found by other studies suggesting that parental supervision is a factor in alcohol use initiation, extensiveness, and progression (Arata et al., 2003). Similarly, a study about the roles of family and peers as predictors of alcohol abuse concluded that higher levels of maternal support and parental monitoring predicted lower substance use (Barnes, Farrell, & Dintcheff, 1997). Adolescents who experience high parental monitoring are more likely to report lower levels of substance use (Marsiglia et al., 2002). Those who have more self control and whose parents

exercise more monitoring, tend not to smoke (Simons-Morton, 2002). Studies show that even those adolescents who have friends who smoke and drink, were less likely to use substances when their parents were more involved, regardless of race and living arrangements (single parent versus two-parent homes) (Simons-Morton, 2002).

Age and maturity may play a role in how vulnerable adolescents are to peer pressure and drug use modeling (Reifman et al., 1998). Parental monitoring was found to significantly reduce the risk of drug initiation during adolescence by affecting the adolescent's association with peers (Guo, Hill, Hawkins, Catalano, & Abbott, 2002). Mother's awareness of opposite-sex friends has been identified as an indicator of parental monitoring, and mother's knowledge of friends has been found to influence the likelihood of teenage cigarette smoking. These protective effects appear to be counterbalanced by the influence of peers. As the adolescents' network expands, the peers influence outside of parental awareness increases and it becomes more difficult for parents to know the adolescent's friends (Feiring & Lewis, 1993).

Parental permissiveness differs from parental monitoring in that it refers to the extent of freedom parents give to their children. Parental permissiveness is an attempt from parents to control the child's behavior. Permissive parents have few requirements for their children and provide little guidance about appropriate behavior (Lamborn, Mounts, Steinberg, & Dornbusch, 1991). Parental permissiveness discourages adolescent from developing self-control to cope with personal issues (Berzonsky, 2004) and has been linked to higher rates of substance use (Barnes, Reifman, Farrel, & Dintcheff, 2000).

Parents influence the development of children's drug norms. Injunctive norms reflect a person's perception of others' likely reactions to certain kind of behavior. Parental injunctive norms are an adolescent's perception of how parents would react to the youth's drug use (Kulis, Napoli, & Marsiglia, 2002). Among preadolescents, injunctive norms are related to parental monitoring as they influence youths' motivation for engaging in certain behaviors (Cialdini, Kallgren, & Reno, 1991). For example, they can influence a youth's decision to try drugs (Kandel, 1980). Youths with strong injunctive norms expect a negative reaction from parents if they use drugs and are thus deterred from using.

The parent-child relationship and the drug-specific messages parents give to their children are key to understanding youth drug use. We hypothesize that these processes are uniquely mediated by gender and variability in acculturation levels. The cultural dimensions of parental monitoring are not well

documented but there are some exploratory studies which suggest that parental monitoring may be expressed differently in Mexican heritage families than mainstream families (Figueroa-Moseley, Ramey, Keltner & Lanzi, 2006). Although highly effective in many cases parental monitoring among Mexican and Mexican American families goes through profound transformations as children and parents go through the acculturation process (Tummala-Narra, 2004). The present study aims at researching those processes and gaining a greater understanding about the ways in which families maintain traditional practices and incorporate and adapt new practices.

### *Gender and Drug Use*

Young males generally have higher rates of alcohol and illicit drug use than young females (Johnston et al, 1991). However, when examining specific subgroups, the pattern is less clear. A study of Mexican American preadolescents suggests that males in the fourth and fifth grades use more substances than females, but these differences attenuate by sixth grade (Katims & Zapata, 1993). One explanation for the narrowing of this gap may be found in elements of traditional Mexican gender roles and cultural norms. Traditional Mexican gender roles can protect against drug use, possibly for both girls and boys (Kulis, Marsiglia & Hurdle, 2003). In the Mexican culture the values of *machismo* and *marianismo* are very important. *Machismo* allows greater social freedom to males while at the same time instills a sense of responsibility and accountability even in the absence of strict monitoring. Boys who have been raised with the values of *machismo* may experience more freedom in their social interactions and therefore more exposure to drug offers and opportunities for drug use. *Marianismo* emphasizes females' obligations to their family. In Mexican families females often experience a greater degree of parental monitoring. *Marianismo* keeps females closer to home and protects females against drug use. However, as girls acculturate, they may cease to adhere to prescribed gender roles, becoming more vulnerable to drug use.

Another important value within Mexican communities is *respeto*. Traditional Mexican families socialize their children to respect the authority of the parents and adults (Fulgini, Tseng, & Lam, 1999). Adolescents' sense of obligation to and respect for their parents may translate into a preference for peers who allow them to fulfill their obligation to their families and maintain respect for their parents, thereby reducing the risk of engaging with deviant peers (Fulgini et al., 1999).

Acculturation can be stressful if it involves a struggle to adapt to the dominant culture while maintaining the culture of origin (Phinney, Lochner, & Murphy, 1990). More acculturated adolescents are at higher risk of substance use (Marsiglia & Waller, 2002). Acculturation also influences youths' expectations of the parent-child relationship and perceptions of parental behavior. Relative to European American parents, Latino parents tend to use an authoritarian style of parenting, characterized by stricter discipline. However, as Latino parents acculturate their parenting practices may change. Acculturation has an eroding effect on the traditional protective factors emanating from culture of origin. Mothers of more acculturated Mexican American adolescents have been found to use inconsistent discipline and monitor their children less, with the result of higher levels of delinquency among the youth (Samaniego and Gonzalez, 1999). It is hypothesized that when parental monitoring is weaker, and permissiveness is high they will have an effect on the adolescent's drug use.

This study utilized self-reports from a large sample of Mexican middle school students, mostly from Latino majority schools in a southwest U.S. city. The main objectives were to gauge the relative extent to which parental and peer influences affect these students' substance use norms and behavior, with emphasis on alcohol, cigarettes and marijuana, and to test for whether these two influences differ by gender.

## **METHODS**

### **Data**

This study is a secondary analysis of data drawn from the pre-test surveys of a randomized trial of a drug prevention program administered to middle school students in a Southwestern city in the United States (for details, see Hecht, Marsiglia, Elek, Wagstaff, Kulis, & Dustman, 2003). Surveys were administered in classrooms at 35 schools that had been block randomized into experimental and control conditions. Students were given the opportunity to complete the survey in English or Spanish. Institutional Review Boards at the investigators' university and at each school district reviewed and approved the recruitment procedures. The investigators obtained authorization from the school districts, principals and teachers, and parents of participating students gave passive consent after receiving a letter explaining the purpose of the study. Pre-test data were collected in seventh grade classes during Fall 1998. To maximize the number of questionnaire items that could be included in the data collection, three versions of the questionnaire were

utilized, each containing a core of common questions. Multiple imputation techniques were used to address planned missing data (Allison, 2002), which have been used successfully in other studies (Graham et al., 2002). The multiple imputation approach created 10 complete datasets. The imputation models contained measures related to substance use, including substance use, drug norms and attitudes, and intentions to use drugs. The multiple imputed datasets were analyzed with complete-data methods. The results of these complete-data analyses were combined to arrive at a single estimate that properly incorporates the uncertainty in the imputed values, using the PROC MI and PROC MIANALYZE procedures in SAS.

Participants could choose their ethnicity from a list that included Mexican/Mexican American, other Hispanic, Black, White, and Other (with a blank space to write down their ethnicity). This study includes only respondents who identified as Mexican or Mexican-American. This subgroup constitutes a total of 2,733 students. Most of the students in the sample had low socioeconomic status, demonstrated by receipt of either a free- or reduced-price school lunch (90%). The sample was gender-balanced with 49% males and 51% females, and 81% were either 12 or 13 years of age, which is age-appropriate for 7<sup>th</sup> grade. Due to the participants' young age use of drugs in this study may actually reflect the starting of experimentation with drugs. This is important because as discussed previously, drug initiation at a young age leads to greater risk of later use (Flory et al., 2004). As is shown by Monitoring the Future Data, by 8<sup>th</sup> grade 17% of adolescents reported drinking in the last month (MTF, 2005). Since attitudes towards substance use are a key precursor to actual use (Simons & Carey, 2000; Sutherland & Shepherd, 2002) we included attitudes as one of the dependent variables.

### Measures

The outcomes examined in this study are Likert-type items that summarize the student's behaviors and attitudes concerning alcohol, cigarette, and marijuana use. Substance use was measured by asking students their recent use of alcohol, cigarette and marijuana. The questions were modeled on those previously used by Flannery, Flannery, Vazsonyi, Torquati, and Fridrich (1994) and were chosen for their developmental appropriateness for the age group under study. The substance measures are ordinal scales assessing the quantities used within the past 30 days, ranging for alcohol from 1=None to 9=Over 30 drinks; for cigarettes from 1=None to 8=More than two packs; and for marijuana from 1=None to 8=More than 40 hits. These variables were

examined separately in multivariate analyses. A composite "Substance Use" measure was constructed by calculating the mean of these three variables; this measure was used to present bivariate (correlational) relationships in a presentation of descriptive results. The Cronbach alpha for the substance use scale was .73.

Personal drug-use norms were measured by three questions concerning the student's opinions on whether the use of alcohol, cigarettes, and marijuana is "OK for someone your age." The scale was scored from 1="definitely OK" to 4="definitely not OK" with a response of "1" indicating weak anti-drug norms and a response of "4" indicating strong anti-drug norms. When combined into a single additive scale, the Cronbach's alpha was .86.

Adolescents were also asked "how many students in the school would you guess used drugs at least once" and "how many kids use drugs regularly?" The responses from these two questions were combined and averaged to compose a new variable, Perceived School Peers' Use. The Cronbach's alpha was .76 for this composite. We also measured the friends' drug use as reported by the adolescent's response to the question "how many of your friends use alcohol, cigarettes, chewing tobacco, or marijuana at least once per month", with answers ranging from 1=none to 6=5 or more. Friends' injunctive norms were assessed through two questions: "how would your best friend react if he/she found out that you smoked cigarettes" and "...that you smoked marijuana" with answers for both questions ranging from 1=very friendly to 4=very unfriendly. A high score indicates strong friends' anti-drug injunctive norms. These two items were combined and averaged to compose a new variable, Friends' Injunctive Norms. The alpha for this composite is .77.

Students' report of their parental monitoring was measured along by the question, "How often do your parents ask where you are going when you leave the house?" with answers ranging from 1=never to 5=most of the time. A low score indicates low or no monitoring, while a high score indicates high monitoring. This is a measure of passive monitoring by the parents. The dataset did not allow for measuring active monitoring, however parental permissiveness and parents injunctive norms were included because they require more active parental involvement in the adolescents' lives. Parental permissiveness was measured using two questions. The first question, "How often your parents let you drink alcohol at parties," was measured on a scale of 1= never to 4=most of the time. A low score signifies less parental permissiveness while a high score signifies more permissiveness. The answers to the

second question, “How often do your parents let you go out whenever you want,” range from 1=never to 5=most of the time, meaning that a low score represents low permissiveness and a high score more parental permissiveness.

Parental injunctive norms were measured by three items that capture the adolescents’ perceptions of their parents’ anger in response to learning that the youth was using alcohol, cigarettes, or marijuana. Responses ranged from 1=not at all angry to 4= very angry. Cronbach’s alpha was .72 for these three items.

Linguistic acculturation (use of English versus Spanish), a control variable in this analysis, has been demonstrated to be a powerful predictor of drug use among Latinos (Epstein, Botvin & Diaz, 2000, 2001; Marsiglia & Waller, 2002). Students were asked separately what language they usually use when speaking with their family and when speaking with their friends. Answers ranged from 1=Spanish preference to 3=English Preference. These items were combined and averaged to create a single item with good reliability (Cronbach’s alpha = .76). Students who spoke Spanish with their friends and family all or most of the time were considered less linguistically acculturated than the group that spoke English most or all of the time.

In addition to linguistic acculturation, several demographic variables acted as controls. Age was calculated in years based on date of birth, while each student identified their gender as male or female. Student participation in the federal lunch program acted as a proxy measure of socioeconomic status. The variable was measured dichotomously with the receipt of a reduced-cost or free lunch indicating lower socioeconomic status and receipt of no assistance indicating higher socioeconomic status. School achievement was measured by the student’s report of the grades they usually receive. Responses ranged from 1= mostly F’s to 9= mostly A’s.

### **Analysis Strategy**

This study examined the relative influence of parental and peer factors on drug use in a group of Mexican heritage girls and boys, and whether these influences differ by gender. Initial tests explored bivariate correlations between the dependent variables, parent and peer variables, and control variables. Subsequent tests explored multivariate relationships. Multiple regressions were initially run with the full sample of Mexican heritage youth. Then, they were run for males and females separately. Gender interaction terms were also created to test whether the effects of the parental and peer predictors differed by gender. These tests are reported in summary form only -- that is, specifying

only those predictors that significantly differed by gender.

Hierarchical regression models were examined, but only the final models are presented. The initial model included demographic variables and peer factors: respondent’s perception of school peers’ substance use, respondent’s report of friends’ substance use, and friends’ injunctive norms. In the second model parent factors were added to the previous model.

## **RESULTS**

Table I offers descriptive statistics and correlations with recent substance use and personal anti-drug norms. The students’ ages primarily fell between 12 and 13 years (81%), and the students came from lower income families as indicated by their receipt of either a free (83%) or reduced-cost school lunch (7%). All of the parental and peer variables were correlated with substance use amount, anti-drug norms and attitudes to use drugs in the predicted direction. Students who reported higher amounts of substance use, weaker anti-drug personal norms, and stronger attitudes to use drugs reported less parental monitoring, more parental permissiveness, weaker parental injunctive norms, perceptions of more substance use by school peers and friends, and weaker friends’ injunctive norms. Control variables were also associated with the outcomes. Older students and students with lower grades reported more substance use, weaker anti-drug personal norms and stronger attitudes to use drugs. Students with higher socioeconomic status reported recently using larger amounts of substances. More linguistically acculturated students reported more recent alcohol, cigarette, and marijuana use, weaker personal anti-drug norms and stronger attitudes to use all three substances

Table II displays by gender the effects of peer and parental factors on recent substance use, anti-drug personal norms and intentions, controlling for key demographics. The results show both parent and peer factors to be important predictors. Turning first to the parental factors, we see that passive parental monitoring did not predict any outcome. The first of the two parental permissiveness measures -- allowing the adolescent to drink alcohol at parties -- predicted greater alcohol use for boys and girls, and greater cigarette use and weaker anti-drug personal norms for girls. The second parental permissiveness measure -- allowing the adolescent to go out whenever he or she wants -- predicted greater alcohol use and weaker anti-drug norms for girls only, greater marijuana use for girls and boys, and stronger intentions to use for boys. Anti-drug parental injunctive norms predicted all of the outcomes for both boys and girls—

**Table I – Means, Standard Deviations, and Correlations with Drug Use and Personal Anti-Drug Norms**

	N	Mean	SD	Correlation with Drug Use	Correlation with Anti-Drug Personal Norms	Intentions to Use Drugs
Recent Alcohol Use	2733	1.93	1.72	0.857***	-0.425***	0.486***
Recent Cigarette Use	2733	1.34	1.03	0.756***	-0.358***	0.465***
Recent Marijuana Use	2733	1.57	1.52	0.833***	-0.442***	0.537***
Gender	2733	0.51	0.49	0.078***	-0.136***	0.080***
Age	2733	12.8	0.56	0.169***	-0.165***	0.153***
Usual Grades in School	2733	6.45	1.83	-0.197***	0.144***	-0.197***
SES	2733	.907	0.29	-0.095***	0.071***	-0.080***
Linguistic Acculturation	2733	3.20	1.09	0.121***	-0.112***	0.141***
Parental Monitoring	2733	4.07	0.88	-0.117***	0.167***	-0.153***
Parents Allow to Drink	2733	-.001	1.00	0.293***	-0.277***	0.244***
Parents Allow Out Whenever	2733	-.002	0.99	0.199***	-0.211***	0.210***
Parents' Injunctive Norms	2733	3.48	0.59	-0.411**	0.420***	-0.393***
Schools' Peers Perceived Use	2733	2.54	0.87	0.327***	-0.300***	0.323***
Friends' Substance Use	2733	3.03	1.92	0.332***	-0.285***	0.352***
Friends' Injunctive Norms	2733	2.85	0.81	-0.450***	0.469***	-0.486***
Personal Norms	2733	1.69	0.72	-0.509***	1.	0.513***

\*p<.05 \*\*p<.01 \*\*\*p<.001

specifically, less use of the three substances, weaker anti-drug personal norms, and weaker use intentions. However, the effect on cigarette and marijuana use was stronger for boys than girls.

Peer factors also predicted the outcomes. The perception of more widespread substance use among school peers was associated with weaker anti-drug norms, stronger intentions to use, and more use of all three substances for both genders; however, this factor's effect on marijuana use was stronger for boys than girls. The perception that one's friends use drugs significantly predicted alcohol and marijuana use and intentions to use among females. Among males it predicted greater use of all three substances, stronger intentions to use, and weaker anti-drug personal norms. Again, the effect on marijuana use was stronger for boys than girls, as indicated by the significant gender interaction. Stronger friends' injunctive norms predicted less substance use, regardless of the specific substance, stronger anti-drug personal norms, and less intentions to use for both males and females. However, the effect on alcohol use and use intentions was stronger for girls whereas the effect on marijuana use was stronger for boys. The effect on the other outcomes did not differ by gender.

Controlling for peer and parental factors, older boys reported more alcohol, cigarette and marijuana use, stronger intentions to use, and weaker anti-drug norms. In contrast, older girls only reported stronger intentions to use and weaker anti-drug norms. Higher

grades predicted more desirable outcomes, except in the case of boys' anti-drug norms, where the effect was not significant. Higher socioeconomic status was related to less substance use among boys but was not related to any girls' outcome. Linguistic acculturation was associated with weaker anti-drug norms and stronger intentions to use for girls but was not associated with any boys' outcome.

## DISCUSSION

Guided by Ecological Risk and Resilience theory, this study focused on micro-level relationships, in this case between the adolescent and parents and the adolescent and peers, attending to culture-specific values (*familismo* and *respeto*) that form the context of these relationships. This study assessed the relative extent to which parental and peer influences affect Mexican students' alcohol, cigarettes and marijuana norms and behaviors. The strength of our study rests in that we addressed a gap in the existing literature by focusing on Mexican youth, a rapidly growing group in the U.S. (U.S.Census Bureau News, 2004). Given that previous studies have reported onset of use as early as 4<sup>th</sup> grade (Donovan, 2007; Katims & Zapata, 1993) it seems appropriate to measure substance use among 7<sup>th</sup> graders. In addition, we add to the body of knowledge concerning parental strategies by separately testing parental measures including a passive monitoring measure, parental permissiveness

**Table II – Unstandardized OLS Regression Coefficients (Standard Errors) Predicting Drug Use, Drug Norms, and Use Intentions by Gender**

	Recent Alcohol Use		Recent Cigarette Use		Recent Marijuana Use		Personal Anti-Drug Norms		Intentions to Use	
	boys	Girls	Boys	girls	boys	girls	boys	girls	m	f
Age	.201** (.08)	.036 (.07)	.174*** (.05)	.012 (.04)	.282*** (.07)	.165 (.06)	-.119*** (.03)	-.068* (.03)	.069* (.03)	.063*** (.03)
Usual Grades	-.054* (.03)	-.077** (.02)	-.039* (.02)	-.058*** (.01)	-.076*** (.02)	-.084*** (.02)	.013 (.01)	.020* (.01)	-.038*** (.01)	-.039*** (.01)
Socio-economic status	-.356* (.15)	-.111 (.15)	-.335*** (.09)	.069 (.09)	-.293* (.14)	-.066 (.12)	.088 (.06)	.004 (.06)	-.095 (.05)	-.034 (.06)
Linguistic Acculturation	.006 (.04)	.011 (.04)	-.048 (.03)	.014 (.02)	.056 (.04)	.042 (.03)	.006 (.02)	-.034* (.02)	.003 (.01)	.039* (.02)
Parental Monitoring	.023 (.06)	-.046 (.06)	.062 (.04)	.009 (.04)	.068 (.06)	.010 (.05)	.002 (.03)	.038 (.03)	.006 (.02)	-.03 (.02)
Permissiveness: Parents allow to drink	.129* (.06)	.225*** (.06)	† .062 (.05)	.095** (.03)	.087 (.05)	.075 (.05)	-.034 (.02)	-.079** (.02)	.026 (.02)	.026 (.02)
Permissiveness: Parents allow to go out	.053 (.06)	.159*** (.04)	† .028 (.03)	.051 (.03)	.100* (.05)	.117** (.04)	-.044 (.02)	-.055* (.02)	.050* (.02)	.040 (.02)
Parents' inj. norms	- .462*** (.10)	-.467** (.14)	† -.326*** (.07)	-.185** (.06)	† -.541*** (.09)	-.325** (.09)	† .305*** (.04)	.238*** (.04)	-.233*** (.04)	-.186*** (.04)
Perception of peers' use	.225*** (.06)	.255*** (.05)	.148*** (.04)	.105*** (.03)	.265*** (.05)	.189*** (.04)	† -.125*** (.02)	-.109*** (.02)	.115*** (.02)	.097*** (.02)
Friends' use	.130*** (.03)	.110*** (.03)	.053* (.02)	.030 (.02)	.073* (.02)	.047 (.02)	† -.027* (.01)	-.018 (.01)	.048*** (.01)	.056*** (.01)
Friends' inj. norms	- .301*** (.08)	-.409*** (.07)	† -.172** (.05)	-.196*** (.04)	† -.037*** (.08)	-.353*** (.05)	† .238*** (.03)	.229*** (.03)	-.192*** (.03)	-.266*** (.02)

\*p<.05 \*\*p<.01 \*\*\*p<.001 † significant interaction with gender

measures and parental injunctive norms, and we examined differences by gender while relying on possible cultural explanations to interpret the results.

In this study, peer variables were more consistently related to the outcomes than parent variables, with the exception of parental injunctive norms which were the most predictive parent factor. This finding of peer effects is consistent with prior literature that documents the growing influence of peers relative to parents during adolescence (Steinberg et al., 1992; Hartup, 1983). This seems counterintuitive within the Mexican culture in which the parent authority is very important. However, other previous studies have reported that adolescents tend to choose peers whose values are similar to their parents' values (Kim, Hetherington, & Reiss, 1999). Within the context of the Mexican culture *respeto* is a value equated to being obedient (Gonzalez-Ramos, Zayas & Cohen, 1998). This value may lead Mexican heritage adolescents to make choices that will make their parents proud, including choice of peers and decisions about whether to use substances. So, it may not be that peers are more influential than parents but that some parental effects operate through peers. Indeed, the finding of parental norms as a potent predictor supports this idea. If adolescents perceive that their parents would react negatively to their substance use, they may steer clear of substance-using peers. Future research could examine the extent to which adolescents select peers who match their parent's norms.

Although the parent variables less consistently predicted the outcomes, some effects were found. Parental permissiveness and injunctive norms were related to several outcomes in the expected direction while passive parental monitoring had no effects on youth substance use. The finding of no parental monitoring effect suggests that parents need to be mindful of the normative expectations they establish with their children and of the extent of their permissiveness, regardless of the extent to which they monitor their children, as these strategies relate to adolescent substance use. Adolescents may benefit from behavioral expectations that clearly prohibit substance use and from moderate permissiveness. Parents who are raising their children in a culture other than their own may face challenges as they attempt to put in practice parental strategies that they are more comfortable with, while at the same time trying to adjust their practices to the new environment.

Our parental monitoring measure captured passive rather than active supervision. With passive monitoring parents rely on their adolescents'

disclosure of information about their comings and goings. Active monitoring, in contrast, entails efforts by parents to, either obtain information from other informed adults about the children's activities, directly observe their children's activities, or become involved in the children's activities in other ways. Other studies (Stattin & Kerr, 2000; Patterson et al., 1992; Dishion and McMahon, 1998) have found active monitoring to protect against substance use and other problem behavior. The conclusion to be drawn then is not that parental monitoring has no effect, but that certain kinds of monitoring or parental influence may be more effective than others. Future research could compare the relative effects of active monitoring, permissiveness, and injunctive norms to identify the most potent influences, which could then be targeted for intervention.

An interesting pattern emerged on the effects by gender. Parental permissiveness predicted cigarette use by girls but not by boys and, although it predicted both boys' and girls' alcohol use, the relationship was stronger for girls than for boys. Among Latinos, alcohol use, in particular by males, is more accepted than the use of other substances. For example, wine or beer consumption with meals is common in some households. It is not surprising, then, that some Latino parents allow their adolescents to drink some alcohol on social occasions, such as family parties where there is adult supervision. However, such permissiveness may become a risk factor when it translates to alcohol use outside the bounds of adult-sanctioned activities. Girls may be especially at risk because by tradition they are kept closer to home, have less exposure to risky situations, and thus less experience in negotiating risk. If girls experience a greater degree of permissiveness, their increased risk of use might reflect the loss of the protective *marianista* cultural role compounded by greater freedom to operate away from the protection of their parents.

Although this study used cross-sectional data, precluding inferences about causality, these findings do add to the body of knowledge that is the foundation for prevention programming and program adaptation. Interventions should examine the strategies parents use and the contexts in which they seem to be most beneficial. Some strategies (e.g., high permissiveness) may send a wrong message to the youth. In addition, high parental permissiveness for girls may be unusual signaling other parental issues or family functioning problems. Clearly there is a lot still to be learned concerning how parents of different cultures may use different parenting strategies, or different levels of parental monitoring

and permissiveness and how these styles influence adolescent's behaviors, specially when members of the family are going through the process of acculturation at different pace. Future research could focus in this type of analysis.

This study also has implications for social workers, educators and counselors who work in schools. Schools are important places in which adolescents form friendships, relate to peers and learn pro- or anti-social behaviors. This may be especially beneficial for Latino adolescents who, for the most part, attend schools that often cannot address their specific needs (Leyendecker & Lamb, 1999). School social workers, educators and counselors who work with Latinos may increase their effectiveness if they become familiar with key Latino cultural values such as *respeto* and *familismo* (Eamon & Mulder, 2005) that underlie families' child-rearing practices. They can help promote pro-social behaviors among adolescents by assisting in the implementation of appropriate programs that cultivate a positive school environment and healthy peer relationships and by supporting parents' efforts to develop their children. School counselors play an important role in addressing the needs of children in schools. Counselors' skills to help students will be enhanced by becoming receptive to the experience of Latino adolescents and their families, and to the specific gender differences in attitudes concerning personal

and friend's drug use. Counselors may work with children to help them understand why parents' monitoring is important to them and beneficial. Counselors working with parents may help them appreciate the difference between passive and active monitoring and the benefits of active monitoring. Educators working with diverse populations may also benefit from using these findings to shape classroom activities, homework assignments, and to interact with Latino parents and students.

It is important to acknowledge that the present findings cannot be generalized beyond Mexican youth. Although the original study sample included members of other Latino national groups, their numbers were too small to permit meaningful analysis. However, this study contributes to the literature in that Mexicans are the largest Hispanic group in the United States and therefore, an important one to focus on. In addition, this research may benefit those who work with Mexican heritage adolescents and families because it is specific to that group, and it may also address programmatic issues relevant to social workers, educators, school counselors and other social service providers in the Southwest or even to those who work with populations of Mexican heritage in other parts of the United States. Further study is needed to determine the applicability of these findings to other Latinos.

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