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Using the Theory of Triadic Influence to Examine Correlates of Positive Drug Expectancies Among Hispanic Adolescents

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Abstract

This study employs the Theory of Triadic Influence (TTI) which articulates the different variables that influence health-related behaviors into streams of influence—intrapersonal, social, and cultural—to better understand factors that influence positive drug use expectancies (PDE) among Hispanic adolescents. Data for the study came from Project RED, which included 1,963 high school students in Southern California. The relationships between participants' drug expectancies and different streams of influence were examined using regression analysis. Participants were mostly females (54.2%); with a mean age of 17.13 years. Controlling for other covariates, there were no cultural stream variables associated with PDE (Model 1). Model 2, assessing social environment stream of influence, had a strong association with PDE (adjusted R^2 = 0.25). PDE significantly increased with drug use consequences (β = .48) parent (β = 1.28) and sibling (β = 2.97) alcohol use, and peer approval of alcohol use (β = 2.0). PDE decreased with increasing parental communication (β = -.22) and peer disapproval of marijuana use (β = -5.2). Model 3, including intrapersonal factors, results showed a significant positive relationship between PDE and drug use consequences (β = .47), parent (β = 1.06) and sibling (β = 2.97) alcohol use, peer approval of alcohol use (β = 2.05), and stress (β = .23). There was a negative significant relationship with parental communication (β = -.21), peer disapproval of marijuana use (β = -5.2), and depression (β = -.09). Findings from this study help organize and clarify the important factors associated with PDE. Leveraging the ordering and categorizations suggested by the TTI sheds light on the social streams of influence as a prime target for interventions.

Keywords

Expectancies, Alcohol use, Drug use, Hispanic/Latino, Adolescents

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Abstract

This study employs the Theory of Triadic Influence (TTI) which articulates the different variables that influence health-related behaviors into streams of influence—intrapersonal, social, and cultural—to better understand factors that influence positive drug use expectancies (PDE) among Hispanic adolescents. Data for the study came from Project RED, which included 1,963 high school students in Southern California. The relationships between participants' drug expectancies and different streams of influence were examined using regression analysis. Participants were mostly females (54.2%); with a mean age of 17.13 years. Controlling for other covariates, there were no cultural stream variables associated with PDE (Model 1). Model 2, assessing social environment stream of influence, had a strong association with PDE (adjusted R^2 = 0.25). PDE significantly increased with drug use consequences (β = .48) parent (β = 1.28) and sibling (β = 2.97) alcohol use, and peer approval of alcohol use (β = 2.0). PDE decreased with increasing parental communication (β = -.22) and peer disapproval of marijuana use (β = -5.2). Model 3, including intrapersonal factors, results showed a significant positive relationship between PDE and drug use consequences (β = .47), parent (β = 1.06) and sibling (β = 2.97) alcohol use, peer approval of alcohol use (β = 2.05), and stress (β = .23). There was a negative significant relationship with parental communication (β = -.21), peer disapproval of marijuana use (β = -5.2), and depression (β = -.09). Findings from this study help organize and clarify the important factors associated with PDE. Leveraging the ordering and categorizations suggested by the TTI sheds light on the social streams of influence as a prime target for interventions.

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Introduction

Adolescent alcohol use has reached a historic low (8.2% among 8th graders, 18.6% among 10th graders, and 30.2% among 12th graders in 2018) (National Institute on Drug Abuse, 2018). Similarly, misuse of prescription opioids among 8th, 10th, and 12th graders has dropped significantly over the past five years. Marijuana use has declined among 8th graders while use among 10th and 12th graders remains unchanged (National Institute on Drug Abuse, 2018).

Despite this decline and evidence of social and health consequences of adolescents' substance use (Chartier & Caetano, 2010), Hispanic adolescents report higher rates of high-risk alcohol and other drug use than their peers during both adolescence and young adulthood (Kann et al., 2018). Immigration experiences, racial/ethnic discrimination, and social and economic disadvantage may place Hispanic adolescents at higher risk for substance use/abuse or disorders (Chartier & Caetano, 2010).

Problematic substance use among college-aged individuals and young adults often begins in adolescence. Therefore, it is critical to better understand adolescent substance use behaviors

and expectancies surrounding substance use to prevent future abuse (Schulenberg et al., 2018). Substance use-related cognitions such as drug use expectancies (DE)—the expected outcomes and the subjective value of those outcomes based on an individual's goals—are relatively easily modifiable and possess strategic value for early substance use prevention among adolescents (Smit et al., 2018; Montes, Witkiewitz, Pearson, & Leventhal, 2019). Additionally, expectancies are perceptual and subjective; therefore, if individuals anticipate that positive effects outweigh possible negative outcomes of engaging in a heath-risking behavior, they are likely to engage in that behavior (Patrick, Wray-Lake, Finlay, & Maggs, 2010).

Expectancies toward drug use develop during adolescent cognitive development and change with developmental maturation (Montes et al., 2019). Drug use expectancies develop through exposure to various substance-using models among peers, family members, and the media; and they are reinforced as adolescents initiate and maintain use (Leventhal & Schmitz, 2006). Despite research evidence suggesting the important and significant etiological role of drug use expectancies in adolescent substance use and prevention efforts (Leventhal & Schmitz, 2006), few studies have examined the factors that shape expectancies, especially among racial and socioeconomic minority groups (Smit et al., 2018).

The Theory of Triadic Influence (TTI) integrates viewpoints from multiple health behavior theories (Flay & Petraitis, 1994). Unlike other comprehensive health behavior theories, TTI has a unique feature: it articulates the different variables that influence health-related behaviors into levels (or tiers) of causation and streams of influence – intrapersonal, social, and cultural (Flay & Petraitis, 1994). Because positive drug use expectancies (PDE) are developed, shaped, and reinforced by cognitive (intrapersonal) and sociocultural factors, this study employs TTI to examine the streams of influence associated with PDE among a sample of predominantly low-income Hispanic adolescents. We hypothesized that social/interpersonal and cultural influences would be more strongly associated with higher levels of PDE compared to intrapersonal-level variables.

Methods

Study Design and Participants

This study employed a secondary analysis of cross-sectional data from Project RED (Retiendo y Entendiendo Diversidad para Salud—Retaining and Understanding Diversity for Health), a longitudinal study completed in Los Angeles, California. For detailed information on Project RED, including information on recruitment and survey procedures, see Unger, Ritt-Olson, Wagner, Soto, and Baezconde-Garbanati (2009) and Unger (2014). Data for this study were from participants who identified as Hispanic and completed the survey during the third wave of data collection (2007), $N = 1,963$.

Measures

This study used *Positive Drug Use Expectancies (PDE)* as our primary dependent variable, measured through a six-item questionnaire (Sussman, Dent, & Stacy, 1999) assessing how likely it is for respondents to experience certain effects when they drank alcohol or used drugs ($\alpha = 0.96$). Examples of questions include, "When I drink alcohol, use marijuana, or other drugs… I feel good; I feel happy; I feel relaxed, I feel less stressed." Responses ranged from 1 =

"No chance" to 6 = "Certain to happen." Responses to each item were summed. Higher scores indicate higher positive drug/alcohol use expectancies.

Guided by the TTI model (Flay & Petraitis, 1994), independent variables examined were categorized into the three streams of influence.

Intrapersonal Stream of Influence

Stress. The Perceived Stress Scale (PSS) was used to assess participants' perception of stress as a result of life events that they experienced in the past month. Participants were asked to indicate how often, in the past month, they experienced the listed stress-inducing situations. The PSS consists of 10 items ($\alpha = 0.72$). Higher scores indicate higher perceived stress.

Depression. The Center for Epidemiological Studies Depression Scale (CES-D) short form was used to assess participants' depressive symptoms (Radloff, 1977). The CES-D short form consists of 11 items ($\alpha = 0.74$) yielding a continuous measure with higher scores indicating more depressive symptoms.

Perceived discrimination. Perceived discrimination was measured using a 10-item measure of participants' perceptions of experienced everyday discrimination ($\alpha = 0.91$). Because this scale can apply to various types of discrimination (e.g., based on race/ethnicity, gender, age, sexual orientation, physical handicaps, etc.), the scale was preceded by the following text: "Sometimes people feel that they are treated differently because of their ethnic or cultural background. How do people treat you?" Higher scores indicate more experiences of perceived discrimination.

Fatalism. Fatalism was assessed using a four-item measure adapted from Cuellar, Arnold, and Gonzalez (1995). Participants indicated their agreement with the items on a Likert scale ranging from 1 = "Definitely not" to 4 = "Definitely yes" ($\alpha = 0.79$). Responses across all the four items were summed with higher scores indicating a higher perception of fatalism.

Social Environment Stream of Influence

Peer substance use environment. Participants were asked to think of their five closest friends and indicate, "How would they feel about you smoking marijuana occasionally?" The same question was asked about alcohol: "How would they feel about you if you had one or two drinks every day?" Response options ranged from 1 = strongly disapprove to 4 = strongly approve. Responses to each question were combined into a binary variable where 0 indicates having friends that disapprove of alcohol/marijuana use and 1indicates having one or more friends that approve of alcohol/marijuana use.

Drug use consequences. The shorter version of the Rutgers Alcohol Problem Index (RAPI) was used to assess participants' positive drug use expectancies (White & Labouvie, 2000). The RAPI short form consists of 18 items adapted for general drug use that asked study participants to indicate how many times they experienced certain consequences in the last month as a result of alcohol or drug use. Participants indicated frequency of each experience on a four-point scale ranging from 1 = Never to 4 = Often 5+. Scores from the items were summed with a higher score indicating a higher frequency of drug use consequences.

Parental and sibling alcohol use. Participants were asked to indicate if any of their parents (or closest two adults) and siblings used alcohol. Responses were coded into binary variables with "1" indicating participants had a parent or sibling that used alcohol, while "0" indicated having no parent or sibling that used alcohol.

Parental monitoring. To assess parental monitoring, participants were asked questions about their parents' monitoring practices. Participants indicated the frequency of parents' monitoring practices on a four-point scale with responses ranging from 1 = Never to 4 = Very often/always. Responses to all questions were summed with a higher score indicating higher parental monitoring levels.

Parental communication. Participants were asked four questions to assess communication patterns with parents. Frequency of parental communication was measured on a scale from 1 = Never to 4 = Very often. Responses were summed with a higher score indicating higher parental communication level.

Cultural Environment Stream of Influence

Way of life. Way of life was measured using the Orthogonal Cultural Identity Scale, which asks adolescents to rate the extent to which they follow the American way of life and the Latino/Hispanic way of life. One question measured the American way of life and one question measured the Latino/Hispanic way of life. Response options ranged from 1 = A lot to 4 = Not at all. Responses to both questions were recoded so that higher scores indicated higher levels on a given way of life.

Cultural identity. The Multigroup Ethnic Identity Measure (MEIM) was used to assess strength of ethnic identity. The measure consists of 12 items with responses ranging from 1 = strongly disagree to 4 = strongly agree. Responses were summed with a higher score indicating stronger ethnic identity ($\alpha = 0.87$).

Acculturative stress. To assess stressors associated with the acculturation process, we used two factors from the Multidimensional Acculturative Stress Inventory (MASI) which assess stress that arises from pressure against acculturation and pressure to acculturate (Rodriguez, Myers, Mira, Flores, & Garcia-Hernandez, 2002). Participants indicated on a scale, ranging from 0 = Not at all stressful to 4 = Extremely stressful, the degree to which each item applied to them ($\alpha = 0.87$ for both subscales).

Demographic Characteristics

Age and gender were self-reported. Socioeconomic status was measured using a question that asked participants whether they qualified for reduced-price lunch.

Data Analysis

Frequencies and means were calculated to describe the study sample. Bivariate analyses (correlations and ANOVAs) were conducted to identify which variables from the intrapersonal, social, and cultural streams of influence were associated with positive drug use expectancies (PDE). Correlates that were significant in the bivariate analyses were included in the final multivariable regression model (Bursac, Gauss, Williams, & Hosmer, 2008). This model controlled for demographic covariates (age, gender, and socioeconomic status) and the random effect of school. All analyses were conducted using IBM Corp SPSS version 24.

Results

Table 1 shows the demographic and descriptive characteristics of participants and results from bivariate analyses. Participants were mostly females (54.2%); with a mean age of 17.13 years; alcohol and marijuana use reported in the past 30 days was 39.8% and 17.4%, respectively. Intention to use alcohol and marijuana in the next 12 months was 56.2% and 19.6% respectively. Of all participants, half qualified for free or reduced lunch. Average drug expectancies score among participants was 17.4 (Range: 0 – 36).

Bivariate Results

Cultural environment factors associated with PDE were pressure to acculturate ($r(1904) = .05$, $p = .02$) and pressure against acculturation ($r(1904) = .05$, $p = .03$). All social environment factors examined were associated with PDE. There was a positive correlation between PDE and drug use consequences ($r(1920) = .37$, $p < .01$) and a negative correlation with parental monitoring ($r(1891) = -.22$, $p < .01$) and parental communication ($r(1889) = -.21$, $p < .01$). There was a significant main effect for parent alcohol use ($F(1, 1912) = 39.75$, $p < .01$), sibling alcohol use ($F(1, 1908) = 111.55$, $p < .01$), peer approval of marijuana use ($F(1, 1820) = 236.44$, $p < .01$), and peer approval of alcohol use ($F(1, 1821) = 126.98$, $p < .01$). For the intrapersonal factors, only stress ($r(1851) = .17$, $p < .01$), depression ($r(1866) = .13$, $p < .01$), and perceived discrimination ($r(1877) = .16$, $p < .01$) had a positive correlation with PDE.

Multivariate Results

Table 2 shows the results of the regression models that examined the relationships between each of the three streams of influence and PDE. In Model 1, assessing the cultural stream, controlling for other covariates, there were no variables associated with PDE. The model was not significant ($F(5, 1120) = 1.6$, $p = .16$), with an adjusted R^2 of .003. In Model 2, social environment factors were added to Model 1, also controlling for covariates and the random effect of school. There was a significant regression equation ($F(12, 1113) = 32.25$, $p < .01$) , with an adjusted R^2 of .25, showing PDE significantly increasing with drug use consequences ($\beta = .48$, $p < .01$) parent ($\beta = 1.28$, $p = .02$) and sibling ($\beta = 2.97$, $p < .01$) alcohol use, and peer approval of alcohol use ($\beta = 2.0$, $p = .004$). Further, PDE decreases with parental communication ($\beta = -.22$, $p = .008$) and peer disapproval of marijuana use ($\beta = -5.2$, $p < .01$).

In Model 3, intrapersonal factors were introduced. The model was significant ($F(15, 1110) = 27.40$, $p < .01$), with an adjusted R^2 of .26. Regression showed a significant positive relationship between PDE and drug use consequences ($\beta = .47$, $p < .02$), parent ($\beta = 1.06$, $p = .04$) and sibling ($\beta = 2.97$, $p < .01$) alcohol use, peer approval of alcohol use ($\beta = 2.05$, $p = .003$), and stress ($\beta = .23$, $p < .01$). There was a negative significant relationship with parental communication ($\beta = -.21$, $p = .01$), peer disapproval of marijuana use ($\beta = -5.2$, $p < .01$), and depression ($\beta = -.09$, $p = .006$).

Discussion

This current paper extends the literature on drug use expectancies using the Theory of Triadic Influence (Petraitis & Flay, 1994) as a heuristic model to understand the correlates of Hispanic adolescents' drug use expectancies. In alignment with NIDA's (2003) well-established

Table1

Participant Characteristics: Demographics and Behavior

Characteristics	Statistics	*p*
Demographic		
Age, years		
Mean (SD)	17.13 (0.57)	
Gender		
Male, n (%)	887 (45.2)	
Female, n (%)	1063 (54.2)	
Reduced lunch		
Yes, n (%)	992 (50.5)	
No, n (%)	240 (12.2)	
Missing	731 (37.2)	
Behavior (past 30-days)		
Alcohol use		
Yes, n (%)	781 (39.8)	
No, n (%)	1166 (59.4)	
Marijuana use		
Yes, n (%)	343 (17.4)	
No, n (%)	1609 (82.0)	
Drug use expectancies, Mean (SD) [Range: 0 – 36]	17.14 (9.89)	
Intrapersonal/Biological environment factors		
Stress, Mean (SD) [Range: 0 – 45]	23.57 (6.28)	**<0.01**
Depression, Mean (SD) [Range: 0 – 80]	34.81 (10.54)	**<0.01**
Fatalism, Mean (SD) [Range: 0 – 16]	10.89 (3.13)	0.12
Discrimination, Mean (SD) [Range: 0 – 36]	13.99 (5.14)	**<0.01**
Social environment factors		
Peer alcohol use		
Peers approve, n (%)	394 (20.1)	
Peers disapprove, n (%)	1461 (74.4)	**<0.01**
Peer marijuana use		
Peers approve, n (%)	341 (17.4)	**<0.01**
Peers disapprove, n (%)	1513 (77.1)	
Parent alcohol use		
None, n (%)	928 (47.3)	**<0.01**
1 or more, n (%)	1024 (52.2)	
Sibling alcohol use		
No sibling/None, n (%)	1219 (62.1)	**<0.01**
1 or more, n (%)	727 (37)	
Drug use consequences, Mean (SD)[Range 0 – 72]	21.17 (5.6)	**<0.01**
Parental monitoring, Mean (SD) [Range 0 – 12]	10.89 (1.54)	**<0.01**
Parental communication, Mean (SD) [Range 0 – 12]	9.86 (3.39)	**<0.01**

Table1 (cont.)

Participant Characteristics: Demographics and Behavior

Characteristics	Statistics	*p*
Cultural environment factors		
American way of life		
Not at all, n (%)	1134 (57.8)	
A little, n (%)	424 (21.6)	
Some, n (%)	216 (11)	
A lot, n (%)	77 (3.9)	0.14
Missing, n (%)	112 (5.7)	
Hispanic/Latino way of life		
Not at all, n (%)	58 (3)	
A little, n (%)	182 (9.3)	
Some, n (%)	534 (27.2)	0.16
A lot, n (%)	1139 (58)	
Missing, n (%)	50 (2.5)	
Cultural identity, Mean (SD) [Range: 0 – 48]	34.29 (7.04)	0.22
Acculturative stress		
Pressure to acculturate, Mean (SD) [Range: 0 – 4]	0.44 (0.5)	**0.02**
Pressure against acculturation, Mean (SD)	0.17 (0.37)	**0.03**

Note. p, test value for bivariate association with positive drug use expectancies using correlation or ANOVA; boldface indicates statistical significance ($p < 0.05$)

principles of prevention (Stone, Becker, Huber, & Catalano, 2012) and risk and protective factor framework, the results of this study further suggest that an increase of protective factors in conjunction with a reduction in risk factors within the social stream of influence could reduce Hispanic adolescents' substance use. Study findings show that factors in the social stream of influence (parental communication, parent and sibling alcohol use, peer approval/disapproval of drug use, and drug use consequences) play a significant role in Hispanic adolescents' PDE.

Previous studies (e.g., Yabiku et al., 2010) have found associations between parental monitoring and substance use. However, parental communication but not monitoring was associated with PDE in this study. Parental communication, as examined in this study, included adolescents asking for advice, discussing problems, and confiding in parents. Parental monitoring, however, entails oversight on adolescents' whereabouts. Thus, parental communication unlike parental monitoring offers more avenues for parents and adolescents to discuss pertinent information relevant to establishing realistic drug use expectancies. This finding supports earlier studies that have suggested that parent-child communication is one of the most important parenting practices with major influence on adolescent behavior and well-being (Davidson & Cardemil, 2009).

The study found drug use consequences were positively associated with PDE. It is possible that adolescents who have experienced drug use consequences have underlying characteristics such as being current substance users (alcohol/marijuana). Therefore, they may already have a well-formed outcome expectancy regarding substance use. In other words, these adolescents' expectancies might derive directly from their personal experiences through memory

activation (Leventhal & Schmitz, 2006). Another possibility could be that in this sample, adolescents who have experienced drug use consequences have become de-sensitized to the effect and now, as a result, determine the benefits/rewards of drug use to outweigh the risk, therefore reporting a higher positive expectancy regarding drug use despite suffering consequences.

Research evidence suggests that individual factors only account for a small portion of the determinants of behavior (Sallis, Owen, & Fisher, 2008), therefore it is not surprising that the individual/biological stream accounted for only a minimal amount of the variance in PDE. However, it is noteworthy that in this sample, having depressive symptoms was negatively associated with PDE. Typically, among adolescents, alcohol is used for socialization and mostly available to adolescents during social gatherings. Adolescents who experience depression might be more socially isolated and therefore less likely to participate in social gatherings where

Table 2

Regression Models for Cultural, Social, and Intrapersonal Influences on Drug Use Expectancies

		β	SE	t	p	CI	Model parameters
Model 1	(Constant)	12.081	8.010	1.508	.132	-3.64, 27.8	$F(5, 1120) = 1.6$ $p = 0.16$ $R^2 = 0.003$
	Age	.244	.466	.524	.601	-.67, 1.16	
	Gender = Male	1.361	.586	2.323	**.020**	.212, 2.51	
	Reduced lunch = Yes	-.447	.739	-.605	.545	-1.90, 1.00	
	Pressure To Acculturate	.023	.041	.550	.583	-.06, .10	
	Pressure Against Acculturation	.055	.089	.619	.536	-.12, .23	
Model 2	Age	-.119	.406	-.294	.769	-.92, .68	$F(12, 1113) = 32.25$ $p < 0.01$ Adj $R^2 = 0.25$ R^2 Change = 0.25 $p < 0.01$
	Gender = Male	-.170	.529	-.322	.748	-1.21, .87	
	Reduced lunch = Yes	-.373	.644	-.580	.562	-1.64, .89	
	Pressure To Acculturate	.020	.036	.549	.583	-.05, .09	
	Pressure Against Acculturation	.007	.077	.088	.930	-.15, .16	
	Drug Use Consequences	.484	.055	8.829	**.000**	.38, .59	
	Parental Monitoring	-.338	.192	-1.763	.078	-.72, .04	
	Parental Communication	-.216	.082	-2.640	**.008**	-.38, -.06	
	Parent Alcohol Use (1 or more)	1.279	.526	2.433	**.015**	.29, 2.31	
	Sibling Alcohol Use (1 or more)	2.965	.548	5.415	**.000**	1.89, 4.04	
	Peer marijuana use (Disapprove)	-5.203	.747	-6.961	**.000**	-6.67, -.74	
	Peer alcohol use (Approve)	2.001	.702	2.850	**.004**	.62, 3.38	

Table 2 (cont.)

Regression Models for Cultural, Social, and Intrapersonal Influences on Drug Use Expectancies

	Age	-.057	.404	-.140	.888	-.845, .74	
	Gender = Male	.011	.550	.021	.984	-1.07, 1.09	
	Reduced lunch = Yes	-.369	.640	-.578	.564	-1.62, .89	
	Pressure To Acculturate	.005	.037	.146	.884	-.07, .08	
	Pressure Against Acculturation	-.017	.077	-.218	.827	-.17, .14	
	Drug Use Consequences	.468	.055	8.463	**.000**	.36, .58	
	Parental Monitoring	-.370	.191	-1.940	.053	-.75, .004	
	Parental Communication	-.206	.082	-2.498	**.013**	-.37, -.04	$F(15, 1110) = 27.41$
Model 3	Parent Alcohol Use (1 or more)	1.065	.525	2.028	**.043**	.04, 2.10	$p < 0.01$ Adj $R^2 = 0.26$
	Sibling Alcohol Use (1 or more)	2.965	.545	5.440	**.000**	1.90, 4.03	R^2 Change = 0.01 $p < 0.01$
	Peer marijuana use (Disapprove)	-5.196	.745	-6.976	**.000**	-6.66, -3.74	
	Peer alcohol use (Approve)	2.049	.698	2.935	**.003**	.68, 3.42	
	Depression	-.092	.034	-2.751	**.006**	-.15, -.03	
	Perceived Discrimination	.077	.057	1.354	.176	-.03, .19	
	Perceived Stress	.232	.060	3.851	**.000**	.11, .35	

Note. SE, Standard error, CI, 95% confidence interval

alcohol is accessible. Hence, it is possible that because adolescents do not typically drink to self-medicate but rather to socialize, those experiencing depression were less likely to have high positive drug use expectancies due to lack of access and limited encounters with peers who model alcohol use (Copeland, Fisher, Moody & Feinberg, 2018).

Although the cultural factors examined in this study were not significantly associated with PDE in the multivariate analysis, they were significantly associated with PDE in the bivariate analysis. Considering this and also examining the model including social and cultural streams of influence (Model 2), we can deduce that cultural factors, perhaps, play an indirect role in driving the significance of the social factors influencing PDE in this sample.

Implications for Practice

Given the significant associations of social factors to PDE in this study, prevention efforts are likely to be more successful within this population if parents and peers are involved in programming. Specifically, prevention messages should be 1) culturally targeted, and 2) focused on two primary indicators of PDE – reducing risk factors and increasing protective factors – particularly those that lie within the interpersonal relationships among youths, their peers, and

parents. Values of the Hispanic culture like familism (*familismo*), should be embedded into health promotion programs aimed at this group. Maintaining the Hispanic cultural values that support the family values and shape social influences will prove beneficial to addressing PDE (Ma et al., 2017).

To reduce unrealistic PDE, substance abuse prevention programs should include skills-based training to increase positive communication between parents and children, facilitate parent-child communication about substance use effects, and draw on positive peer influence. These concepts are well established in the literature and in prevention practices as critical components of adolescent substance abuse prevention across many populations (Mogro-Wilson, 2008; Villagrana & Lee, 2018). Specifically, it has been shown that targeted parent-child communication decreases the risk of substance use in adolescents (Shin, Lee, Lu, & Hecht, 2016).

Limitations

This study has several limitations. First, all data were self-reported, and therefore subject to response bias. Second, the cross-sectional nature of this study and the fact that interactions were not tested should be considered when interpreting findings. Third, while cultural values are often shared across many Hispanic/Latino subgroups, this study did not take into consideration possible differences across sub-ethnic groups. Despite these limitations, this study fills an important gap in understanding the factors associated with positive drug use expectancies among Hispanic adolescents.

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