

ARTICLES

## School predictors of alcohol use in high school Hispanic and non-Hispanic youth

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### ABSTRACT

Many youth alcohol prevention programs are not culturally sensitive and have focused on avoidance tactics. Given the differences in alcohol use and the possibly differing intervention strategies for Hispanic and non-Hispanic youth, this study aims to analyze the contributing factors of alcohol use within these two groups. Two hundred and one high school students participated in a survey. Findings indicate that prevention programs should focus on situational opportunities to use alcohol for both Hispanic and non-Hispanic youth. For Hispanic students, school management skills did not relate to less alcohol use, as expected. There should be less emphasis on how risky drinking can be, and more emphasis on the moral implications or “wrongness” of drinking, particularly for non-Hispanics. The discussion includes some possible interpretations of the relationship between skill management skills and heightened alcohol use for Hispanic students.

### KEYWORDS

adolescent; alcohol; Hispanic

Over the past twenty years, alcohol use has declined among non-Hispanic adolescents, yet alcohol use among Hispanic youth has remained high (Johnston, O'Malley, Bachman, & Schulenberg, 2012). Hispanic youth are at a higher risk for negative outcomes from alcohol use compared to their non-Hispanic peers. Hispanic youth experience greater incidences of low self-esteem, aggressive behaviors, teenage pregnancy, and dropping out of high school (Bossarte & Swahn, 2008; U.S. Census Bureau, 2010). Data from the Youth Risk Behavior Survey (Centers for Disease Control and Prevention, 2012) revealed that 73% of Hispanic youth reported having consumed alcohol in their lifetime, compared with 71% of non-Hispanic youth. Data from the Monitoring the Future survey indicated that Hispanic youth are more likely than whites to initiate early alcohol use (Johnston et al., 2012). Alcohol and substance use before the age of 17 is a strong predictor of later use and dependence (Brook, Brook, Zhang, Cohen, & Whiteman, 2002; Dewit, Adlaf, Offord, & Ogborne, 2000), even when genetic and family influences are taken into account (Grant et al., 2006; Lynsky et al., 2003). Given the differences in alcohol use between Hispanic and non-Hispanic youth, this study aims to analyze the contributing factors to alcohol use for these two groups.

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Understanding alcohol use for these two groups (Hispanic and non-Hispanic) can lead to tailored interventions that are specific to each. Access to prevention programs that are school based continue to be a struggle in diverse communities. Kumar, O'Malley, Johnston, and Laetz (2013) found that schools with a higher percentage of students participating in federal lunch programs, the majority of whom are African American and Hispanic, had access to a significantly lower-than-average number of substance use prevention programs at their schools, compared with schools having fewer students enrolled in federal lunch programs, which also tend to have a predominately white student body. To move one step further, beyond access to the programs, there is the issue of cultural relevance in the content of substance use prevention programs.

Healthy People 2020 (USDHHS, 2010) focuses on preventing youth substance use by providing evidenced-based, research-proven programs for diverse racial and ethnic populations. However, there continues to be a lack of information on whether common risk and protective factors for prevention models are similar or different for Hispanic and non-Hispanic youth. Many prevention programs focus on avoidance tactics designed to limit opportunities for youth to use alcohol, such as increasing the understanding of the risks involved in drinking, and decreasing favorable attitudes towards drinking (Kann, Telljoham, & Wooley, 2007). A review of the key elements of evidenced-based programs in the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA) registry (SAMHSA, 2014) indicate that many prevention strategies increase social skills, such as peer social helping skills; personal school involvement; and school management skills, to help decrease alcohol use. However many of these programs have been tested with either Hispanic or non-Hispanic students and few with both populations in the same school.

Keepin' it REAL is a prevention program recognized by SAMHSA as a model program built specifically for low-income Mexican American youth within a predominately Mexican American community in the Southwest (Marsiglia, Kulis, Yabiku, Nieri, & Coleman, 2011). It addresses peer norms and is culturally grounded in the prevention of substance use. However, there is little research concentrated on low-income school settings that contain both Hispanic and non-Hispanic youth, to investigate whether there are differences in opportunities to use alcohol, favorable attitudes towards alcohol, perceived risks of alcohol use, and protective effects of social helping skills and school management behaviors, to try and avoid alcohol, among Hispanic and non-Hispanic youth.

### **Situational opportunity to use alcohol**

Understanding the earliest stages of substance involvement is important for strategies that intend to prevent alcohol use and alcohol dependence. Thus, the opportunity to drink, and the transition to more sustained use, is relevant for prevention strategies (Benjet et al., 2007; Chen, Storr, & Anthony, 2005). Van Etten and Anthony (2001) studied male and female differences in transitions from first-drug-use opportunity into first time-of-use, in their longitudinal study of youth 12 and

older. Results indicated that male–female differences in the prevalence of drug use were due to different probabilities of having an initial opportunity to try alcohol or drugs, rather than different probabilities of becoming a substance user once the first use had occurred (Van Etten & Anthony, 2001). Hispanic youth are at heightened risk as they are more likely to drink and get drunk at an earlier age than non-Hispanic white or black youth (Johnston et al., 2012). Evidence shows that Hispanic youth tend to use drugs more because they are exposed to substance abuse in their community, and are more likely to be offered drugs. More than 40% of Hispanic teens have been offered drugs at school, which is significantly higher than Caucasian (30%) and African American teens (28%) (The Partnership at DrugFree.org, 2012). Also, one-quarter of Hispanic teens witness drug use in their neighborhood.

Wagner and Anthony (2002) conducted a subsequent study, where retrospective data were reorganized in person-period records, to estimate the relative risk of having an opportunity to try marijuana in relation to prior use of alcohol or tobacco. Results showed that once marijuana exposure had occurred, the probability of initiating marijuana use depended upon a prior history of using alcohol or tobacco. Therefore, the opportunity to use alcohol is a precursor to alcohol use and (other) substance use later on, and the opportunity heavily influences the decision to use alcohol. For this study, it was hypothesized that an opportunity to drink alcohol would coincide with a higher level of alcohol use, for both Hispanic and non-Hispanic youth.

### **Perceived risk and favorable attitudes**

Adolescents' expectations or beliefs about the anticipated outcomes of alcohol use are robust predictors of overall levels of alcohol use. There is often a mixed incentive to use alcohol, with both positive and negative consequences. Alcohol creates both positive and negative associations, even if the negative expectancies are more highly endorsed (Noel & Thomson, 2012; Burton, Pedersent, & McCarthy, 2012). In fact, children have been able to role-play, in detail, the use of alcohol in adult social life as early as age six (Dalton et al., 2005). Some expectancy studies have obtained evidence that young children's alcohol cognitions can best be characterized as an ambivalent mix of negative and positive beliefs about drinking outcomes (Cameron, Stritzke, & Durkin, 2003). Furthermore, as youth approach the typical age of onset (approximately 14 years of age in the U.S.; Chen, Yi, & Faden, 2011), the reported likelihood of negative drinking outcomes may decrease, while the reported likelihood of positive outcomes may increase. Individual differences in the degree of these shifts predicts drinking onset (Noel & Thomson, 2012; Wiers, de Jong, Havermans, & Jelicic, 2004). Hispanic youth have reported to be less afraid of using drugs and alcohol than their white and Black counterparts, with Hispanic youth indicated that taking drugs or alcohol scares them (55%) compared to white 62% and Black 59% (The Partnership at DrugFree.org, 2012). Despite this research on the mixed consequences given to drinking, prevention continues to focus on psychological

variables, such as beliefs related to alcohol usage and associated risks, which have the appearance of being highly modifiable.

Youth prevention programs target the psychological correlates of drinking, because these variables are more malleable and responsive to intervention than social, cultural, and environmental factors (Callas, Flynn, & Worden, 2004). One psychological variable that has consistently appeared in the literature as a predictor of alcohol use is expectancy about the outcome of consuming alcohol (Fromme & D'Amico, 2000; Wiers et al., 2004). Prevention curricula have therefore addressed alcohol expectancies, seeking to decrease positive, and increase negative, alcohol-related beliefs (Springer et al., 2004). The propensity for risk-taking and unconventionality are dimensions of two psychological variables that are positively associated with substance use (Fromme & D'Amico, 2000; Wiers et al., 2004). For this study, if youth perceived a high level of risk involved in drinking and had an unfavorable attitude towards drinking, they were hypothesized to use alcohol less, among both Hispanic and non-Hispanics.

### **Social helping skills**

Environmental factors, including peer influences, have been linked to adolescent substance use in the literature. Peer relationships are a critical aspect of the social context that can precipitate adolescent substance use (Barrera, Biglan, Ary, & Li, 2001; Brook, Brook, Arencibia-Mireles, Richter, & Whiteman, 2001; Fowler et al., 2007). Adolescence is a developmental period of heightened responsiveness to social reward, implying an increasing desire to fit in among peers (Spear, 2000). A large body of research has revealed the peer environment to be a strong influence on adolescent substance use; a peer's substance use and negative attitude about substance use have consistently been found to be a risk factor for an adolescent's own substance use (e.g., Mason, Mennis, Linker, Bares, & Zaharakis, 2014; Valente, Unger, & Johnson, 2005).

However, though a peer group can negatively influence an individual adolescent in a variety of ways, a peer group can have a positive influence, as well, influencing individuals to avoid alcohol use. Researchers have shown that peer disapproval of substance use acts as a protective factor for adolescent substance use (Mason et al., 2014). Research indicates that prevention programs, which help build youth social skills and problem solving, lead to less alcohol use (Cuijpers, 2002; Komro & Toomey, 2002; Stigler, 2011).

Some preliminary evidence suggests that race/ethnicity also interacts with peer factors; recent research has demonstrated that multiracial youth report higher rates of yielding to peer pressure than some single-race youth, even after controlling for age, gender, and socioeconomic status (Choi, He, Herrenkohl, Catalano, & Toumbourou, 2012). For example, in an effort to identify with non-Latino peers, Mexican youth may be motivated to initiate substance use or place themselves in situations where substances are being used (Marsiglia, Kulis, Hecht, & Sills, 2004). Given the contradictory findings on social helping of peers as a both a risk and protective factor, this study will hypothesize that youth who assist others and have high levels of

social helping skills (defined as youths' ability to give help to peers and get help for themselves when they have problems), will benefit from engaging in social helping and therefore use alcohol less. The reason for the direction of this hypothesis is the mutual aid intervention (not evaluated in this study) that was used with these youth which is a process that focuses on helping others as a protective mechanism.

## **School management**

Past research has repeatedly shown that attachment or bonding to conventional institutions, such as school, is inversely related to delinquency, school failure, and overall levels of substance use (Bryant, Schulenberg, O'Malley, Bachnian, & Johnston, 2003; Guo, Hawkins, Hill, & Abbott, 2001; McNeely, Nonnemaker, & Blum, 2002). Much of this research stems from the tenets underlying social control theory (Hirschi, 1969). Specifically, various forms of deviant behavior result from a failure to internalize conventional norms, and lead to a breakdown in the bonds between the individual and society. Therefore, students who hold conventional beliefs about the value of school, care about their education, do well, and are committed to school are less likely to engage in antisocial behavior and substance use (McNeely et al., 2002; Najaka, Gottfredson, & Wilson, 2001). In many Hispanic cultures, great emphasis is placed upon the importance of education and school attainment (Hammer, Rodriguez, Lawrence, & Miccio, 2007). Based upon the strong influence of school attachment on alcohol use, this study hypothesized that youth with good school management skills will use alcohol less; this finding is expected to be stronger for Hispanic youth than for non-Hispanic youth.

This study aims to investigate the influence of risk factors such as the opportunity to use alcohol, favorable attitudes towards alcohol, the associated perceived risks of alcohol use, the protective effects of social helping skills, and school management behaviors related to alcohol use, for Hispanic and non-Hispanic youth. It is hypothesized that: (1) youth given opportunities to drink alcohol would coincide with higher levels of alcohol use for both non-Hispanic and Hispanic youth; (2) youths' perceived high levels of risks involved with drinking and unfavorable attitudes towards drinking would coincide with lower alcohol use for both Hispanic and non-Hispanic youth; (3) youth who assist others and have high levels of social helping skills will benefit from engaging in social helping and use alcohol less; this finding is expected to be stronger for Hispanic youth than for non-Hispanic youth; and (4) youth with good school management skills will use alcohol less; this finding is expected to be stronger for Hispanic youth than for non-Hispanic youth.

## **Methods**

### ***Procedures and participants***

This study utilizes data from the Evaluating Mutual Aid Groups Project, an intervention project aimed at lowering substance use and increasing group engagement, and was conducted in a city in the Northeast (Mogro-Wilson, Letendre, Toi, &

Bryan, 2015). A community agency, providing social work services and group interventions to fourteen high schools in a large urban center, was the point of contact for recruiting study participants. The high schools were predominantly African American and Hispanic with approximately 30%–40% white students, in most of the schools. Students involved with substance use were referred to the school counselor for academic, behavioral and peer problems, which impacted school functioning. The counselor met with students to discuss membership in the mutual aid groups, run by the community agency at the school. The counselor either enrolled a student in the intervention (treatment) group, or placed he or she on a waiting list (control group), and each student was given a baseline survey. For the purposes of this study, only measures given at baseline (September–October 2011) are utilized. All responses on the survey were anonymous and confidential. A total of 201 high school students participated; there were 120 students in the treatment condition and 81 in the control group.

### ***Variables and measures***

#### ***Alcohol 30-day use***

The question about alcohol use came from items used and developed by the Monitoring the Future Study (Johnston et al., 2012), “How many days, during the last 30 days, have you had a drink containing alcohol (such as beer, wine, wine coolers and liquor) of more than just a few sips?” Response options ranged from zero days to 20 or more days per month.

#### ***Hispanic ethnicity***

One question asked: Are you Hispanic (yes or no)? No additional questions regarding Hispanic status were asked (i.e., Mexican, Puerto Rican, etc.)

#### ***Opportunity to drink alcohol***

A question about the opportunity to drink alcohol was created by the authors, to determine the amount of conviction needed for youth to use alcohol with peers: “When I am out with my friends and there is an opportunity to drink, I take it.” Responses ranged from 1 (“No!”) to 4 (“YES!”).

#### ***Perceived risk of alcohol use***

A question about participants’ perceived risk of alcohol use is part of the Perceived Risk of Drug Use Scale (Arthur, Hawkins, Catalano, & Pollard, 1998): “How much do you think people risk harming themselves (physically or in other ways) if they take one or two drinks of an alcoholic beverage (beer, wine, liquor) nearly every day?” The answers followed a 4-point scale, ranging from “no risk” to “great risk.”

#### ***Favorable attitudes towards alcohol use***

A question assessing favorable attitudes toward alcohol use is part of the Favorable Attitudes Towards Drug Use Scale (Arthur et al., 1998). “How wrong do you think



it is for someone your age to drink beer, wine, or hard liquor (vodka, whisky, gin) regularly?” Response options followed a 4-point scale, ranging from 1 (“not wrong at all”) to 4 (“very wrong”).

### ***Social helping skills***

The Assistance Skills Scale assesses young people’s ability to give help to peers and get help for themselves when they have problems (Hansen, 1997). It contains five items, following a 5-point scale, that ask about the past 30 days and how many times a student has given friends advice and/or helped others understand their problems. The Cronbach’s alpha was 0.72 for this scale.

### ***School management***

The School Management subscale is from the Personal and Social Skills Inventory (PSSI), developed and used by the Reconnecting Youth program, which is a prevention program for reaching at-risk youth (Eggert & Nicholas, 2003). This subscale has six statements, and utilizes a 5-point scale, with higher scores indicating greater skill levels; the Cronbach’s alpha for this scale was 0.68. The statements were: (1) “In managing school, I identify bad habits and barriers that contribute to poor school performance”; (2) “I can resist peer influences to skip classes”; (3) “I take deliberate steps to improve my attendance”; (4) “I take deliberate steps to improve my grades”; (5) “I contract with teachers for help and support”; and (6) “I get back on track when my attendance and /or grades start to ‘slip.’”

### ***Data analysis***

Descriptive analysis and significance testing on background characteristics was conducted to analyze differences between Hispanic and non-Hispanic youth. Independent samples *t*-tests was used to compare descriptive information on risk and protective factors and alcohol use, comparing non-Hispanic and Hispanic youth. Correlations on the risk factors related to alcohol use and protective factors on alcohol-drinking behaviors was conducted. Standard multiple regression with comparisons of the model was used to examine the impact of risk factors related to alcohol use and protective factors on drinking alcohol behaviors in Hispanic and non-Hispanic youth. The Fisher’s *Z* test was used to compare how well the independent variables predicted alcohol use for the two groups. To compare the structure or weights of the model, for the non-Hispanic and Hispanic groups, the Hotelling’s (1940) *t*-test was used.

## **Results**

The characteristics of the study sample measured at baseline are provided in [Table 1](#) and compare non-Hispanic and Hispanic youth. The sample consisted of 201 adolescents, of which half were female (53%), ranging in age from 13 to 18 years, with

**Table 1.** Demographic characteristics comparing non-Hispanic and Hispanic youth ( $n = 201$ ).

	Entire Sample ( $n = 201$ )		Non-Hispanic Youth ( $n = 100$ )		Hispanic Youth ( $n = 101$ )	
	Frequency	%	Frequency	%	Frequency	%
Sex						
Female	106	53%	50	50%	56	55%
Male	95	47%	50	50%	45	45%
Age ( $M = 15.41$ )			( $M = 15.49$ )		( $M = 15.33$ )	
13	8	4%	5	5%	3	3%
14	38	19%	18	19%	20	20%
15	52	26%	22	23%	30	30%
16	69	35%	30	31%	39	39%
17	27	14%	20	21%	7	7%
18	4	2%	2	2%	2	2%
Race						
White	62	31%	52	53%	10	10%
Black	41	21%	35	34%	7	7%
Asian	4	2%	4	4%	0	0%
Other	91	46%	9	9%	82	83%
Hispanic	101	50%	0	0%	101	100%
Grade						
9th grade	37	19%	20	20%	17	17%
10th grade	75	38%	37	37%	38	38%
11th grade	63	32%	20	20%	43	43%
12th grade	25	13%	22	22%	3	3%
Experience with drug prevention	86	43%	42	42%	44	44%

a mean age of 15.41. Youth grades ranged from 9th to 12th grade, with 19% in 9th grade; 38% in 10th grade; 32% in 11th grade; and 13% in 12th grade. Of the sample, 31% identified as white, 21% as black, and 2% as Asian, with 46% selecting “other” as a race option. The “other” race category is made up of Hispanic youth identifying themselves as “other.” Youth were asked if they had any previous experience with a drug prevention program, and almost half indicated that they had (43%). Half of the participants self-identified as Hispanic ( $n = 101$ ). There were no significant differences between the non-Hispanic and Hispanic youth in terms of gender, age, grade, or experience with drug-prevention programs.

Table 2 presents descriptive information on risk and protective factors and alcohol use, comparing non-Hispanic and Hispanic youth. Independent samples  $t$ -tests

**Table 2.** Means and standard deviations for risk and protective factors and alcohol use by ethnicity.

	Non-Hispanic Youth ( $n = 100$ )		Hispanic Youth ( $n = 101$ )	
	Mean	SD	Mean	SD
Opportunity to drink	2.32	1.00	2.37	1.01
Perceived risk of drinking	3.10	0.94	3.00	1.03
Favorable attitude towards drinking	2.18	1.02	2.13	0.96
Social Helping skills	1.58	0.66	1.78	0.79
School Management	3.57	0.73	3.49	0.69
Alcohol 30-day use	0.91	1.23	0.97	1.44

Note. \* $p < .05$ .



**Table 3.** Correlation matrix of alcohol use indicators.

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Opportunity to drink (1)	1	-.169*	-.506*	-.024	-.307*	.023	.487*
Perceived risk of drinking (2)		1	.263*	-.014	.211*	-.051	-.136
Favorable attitude towards drinking (3)			1	-.041	-.206*	-.027	.385*
Social helping skills (4)				1	-.029	.140*	.142*
School management (5)					1	-.058	-.146*
Hispanic ethnicity (6)						1	.022
Alcohol 30-day use (7)							1

Note. \* $p < .01$ .

were used to compare the means of the two groups; there were no significant differences between the groups on any of the variables at the  $p < .05$  significance level. The focus of this study was on ethnic differences and not on gender. However, given the literature supporting gender differences on alcohol use, independent  $t$ -tests were conducted. These analyses are not presented in the table but were conducted to detect any sex differences in the entire sample comparing female ( $n = 106$ ) to male ( $n = 93$ ) adolescents on the opportunity to drink; the perceived risk of drinking; favorable attitudes towards drinking, social helping skills, and school-management skills. The only significant difference between male and female participants regarding the above listed variables was on social helping skills, with female participants scoring significantly higher on ( $M = 1.91$ ,  $SD = 0.73$ ) than males ( $M = 1.44$ ,  $SD = .65$ ),  $t(197) = 4.776$ ,  $p < .001$ .

Table 3 provides a correlation matrix on the risk factors related to alcohol use (opportunity, risk, and attitudes) and protective factors (social and school) on alcohol-drinking behaviors. Significant correlations exist between: the opportunity to drink and the perceived risk of drinking; favorable attitudes towards drinking; school management and alcohol use. Also apparent are significant correlations among alcohol use, social helping skills, and school management.

Standard multiple regression with comparisons of the model was used to examine the impact of risk factors related to alcohol use (opportunity, risk, and attitudes) and protective factors (social and school) on drinking alcohol behaviors in Hispanic and non-Hispanic youth. Tabachnick and Fidell's (2013) recommendations for sample size for multivariate regression uses the number of independent variables ( $N > 50 + 8$  (number of IVs) =  $N$ ). For this study the  $N$  should be larger than 90, and we have a total sample of 201. With the non-Hispanic sample of 100 and Hispanic sample of 101, this sample size is adequate for this analysis. Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity.

**Table 4.** Multiple regression analysis of the effects of risk and protective factors for 30-day alcohol use among non-Hispanic and Hispanic youths ( $n = 201$ ).

	Non-Hispanic Youth ( $n = 100$ )			Hispanic Youth ( $n = 101$ )		
	b	$\beta$	Sig.	b	$\beta$	Sig.
Opportunity to drink	.469	.382	.001**	.580	.406	.001**
Perceived risk of drinking	.096	.073	.378	-.155	-.111	.239
Favorable attitude towards drinking	.298	.247	.010*	.209	.140	.191
Social helping skills	.554	.295	.001**	.072	.040	.664
School management	-.253	-.150	.077	.403	.194	.044*
$R^2$	.454			.252		

Note. \*  $p \leq .05$ , \*\*  $p \leq .001$ .

The total variance explained by the model for non-Hispanic youth as a whole was 45.4%,  $F(5,92) = 15.30$ ,  $p < .001$ . In the model, five independent variables were entered and all standardized and unstandardized betas are presented in Table 4. Three independent variables contributed significantly to alcohol use for non-Hispanic youth: opportunity to drink, favorable attitude towards drinking, and social helping skills. Having an opportunity to drink alcohol was statistically significant with the highest standardized beta value ( $\beta = .382$ ,  $p = .001$ ). Having social helping skills with peers was positively related to alcohol use ( $\beta = .295$ ,  $p = .001$ ). Favorable attitudes toward drinking was positively related to alcohol use ( $\beta = .247$ ,  $p = .010$ ).

The total variance explained by the model for Hispanic youth as a whole was 25.2%,  $F(5,92) = 6.193$ ,  $p < .001$ . In the model, five independent variables were entered and all standardized and unstandardized betas are presented in Table 4. Two independent variables contributed significantly to alcohol use for Hispanic youth: opportunity to drink and school management. Having an opportunity to drink alcohol was statistically significant in relation to drinking alcohol, with the highest standardized beta value ( $\beta = .406$ ,  $p = .001$ ). The ability to manage school was positively related to alcohol use ( $\beta = .194$ ,  $p = .044$ ).

The Fisher's  $Z$  test was used to compare how well the independent variables predicted alcohol use for the two groups (Steiger, 1980). Comparison of the fit of the model for non-Hispanic and Hispanic youth revealed that there was a significant difference between the respective  $R^2$  values,  $Z = 1.86$ ,  $p < .05$ , indicating that the model predicts alcohol use significantly better for non-Hispanic youth, as compared to Hispanic youth. To compare the structure or weights of the model, for the non-Hispanic and Hispanic groups, the Hotelling's  $t$ -test (Hotelling, 1940)  $t = -2.17$ ,  $p < .05$ , indicated that there are structural differences between the multiple regression model predicting alcohol use for non-Hispanic and Hispanic youth. Inspection of the standardized weights of the two regression models suggests that three of the independent variables (opportunity to drink, favorable attitudes towards drinking and social helping skills) are important predictors of non-Hispanic alcohol use. For Hispanic youth, having an opportunity to drink and school management predicted

alcohol use. We did not examine the individual predictors for between-group differences, by utilizing interaction terms, because of the collinearity among the interaction terms, or between predictors, particularly when using multiple predictors. In addition, this analysis does not involve the comparison of two models or the examination of the suitability of the two models.

## Discussion

Recently, there have been many appeals for adaptations to existing prevention programs that better fit local needs and are culturally situated and contextualized. This study recognizes the unique needs of high school students of Hispanic and non-Hispanic ethnicities, residing at the same school. The study findings indicate that the first hypothesis—predicting increased use of alcohol due to the opportunity to use alcohol—is a strong factor for both Hispanic and non-Hispanic youth. This finding helps in the understanding that the earliest stages of substance involvement—having the opportunity to drink—will most likely lead to a transition into drinking. Prevention strategies can focus on this finding, to help youth create strategies to avoid situations where there is alcohol present, and practice avoidance strategies once in that situation.

In addition, this study indicated a relationship between unfavorable attitudes towards drinking and drinking alcohol—where youth who think it is bad for someone their age to drink the alcohol are less-inclined to drink—among non-Hispanic youth. One explanation for this finding to be concentrated solely among non-Hispanics is the possibility that there is a cultural acceptance of alcohol in Hispanic communities, making this less of a predictive factor for alcohol use among Hispanics (Vasquez, 2009). There was no relationship between perceived risk of drinking and drinking alcohol, for either Hispanic or non-Hispanic youth. Perhaps prevention programs could benefit from this finding by placing less emphasis on how risky drinking is and more focus on the moral implications or “wrongness” of drinking, such as asking youth to understand who they may hurt when they drink. In addition further research should look into the nuances of what it means for a youth to say drinking is “wrong,” if this a moral objection rooted in a personal value system, or are youth not interested in drinking because they associate risk with harm to others.

The third hypothesis, about how social helping skills may reducing alcohol consumption, was rejected. This study found that for non-Hispanic youth, more social helping skills and/or helping of peers was associated with more drinking. There was no significant finding for Hispanic youth. A possible interpretation of these findings might be found in the research that demonstrates that adolescents are particularly vulnerable to peer pressure, related to substance use (Kelly et al., 2012). Associating with a deviant peer group in adolescence can be highly prognostic of an escalation of problem behaviors (Dishion, Nelson, & Bullock, 2004; Patterson, Dishion, & Yoerger, 2000). A youth's affiliation with a deviant or substance-using peer group

can influence individual behavior in a variety of ways, such as social learning, facilitation, peer pressure and deviancy training, during which peers reinforce each other by endorsing and encouraging deviant behaviors and activities (Dishion & Owen, 2002; Patterson et al., 2000). In addition, selection factors may also be in play, in that troubled or antisocial children tend to gravitate toward antisocial peers, perhaps in an effort to create social bonds (Kauffman & Brigham, 2010). Therefore, the social helping skills measure could have been more strongly related to and indicative of involvement with deviant peers, thus leading to more alcohol use.

The final hypotheses, relating school management skills to drinking behaviors, was rejected. For Hispanics, the higher the school management skills, the higher the alcohol use. There was no significant result for non-Hispanic youth. Social control theory holds that youth who care about their education and do well in school will not want to risk their school-related accomplishments and relationships by participating in unlawful behavior. As a result, the school may serve as a protective factor from at-risk behaviors for some youth, particularly those who experience a positive academic and social environment while at school. However, in this study, the measure of school management may have detected an urge among youth to compensate for other, negative issues that are occurring. This may, in turn, lead to difficulty connecting with the school environment either academically or socially, leading to increased alcohol use.

Another possible explanation for the relationship found in this study between high-school management skills and alcohol use is the stress associated with managing school responsibilities. This stress was felt more strongly among Hispanic youth, as they may tend to place a greater value on school attainment, thus leading towards alcohol use. Some research suggests that the experience of strained social relationships and a heightened sense of powerlessness/helplessness may induce youth to rely more heavily on substance use, as a means of emotional self-regulation that requires little effort or ability, promises instant effects and provides a sense of control (Botvin & Griffin, 2007; Labouvie, 1986). In addition another possible explanation for these findings is that students who are more actively engaged in school (as is indicated by higher scores on their self-appraisal of their school management skills) are also exposed to more discrimination, which has been shown to predict earlier and more consistent substance use. It is possible that there are other ways for Hispanic youth to find appropriate, school-related stress reduction techniques and support networks. In a study of 617, 15- and 18-year-olds, regarding use of alcohol and marijuana for stress reduction, it was found that environments that were unable to provide social support mechanisms tended to foster these feelings of powerlessness/helplessness; this feeling of a lack of personal control is “conducive to the development of a relatively strong link between substance use and emotional self-regulation in adolescence” (Labouvie, 1986, p. 342).

There were a few limitations to this study. The first is that the research was conducted in a concentrated area of an urban center in the Northeast. There is no information on the Hispanic sub-groups that the youth identified with, such as being

Puerto Rican or Mexican-American, among others. In addition, there were no acculturation measures given to the students, therefore making it impossible to determine the effects of acculturation or generational status on these findings. There is also the possibility of measurement error in the over or under reporting of substance use, as this was a youth self-report measure. Finally, the study is also limited in the ability to generalize to other populations, this was a small subset of youth in an urban section of the northeast.

There are advances in research suggesting that interventions should accommodate ways that “sociocultural diversity interacts with diversity in ecological contexts within which individuals live” (Trickett, 1996, p. 218). There are many recent appeals arguing for adaptations to existing programs, to better fit local needs and that are more culturally situated and contextualized (Roberto, Krieger & Beam, 2009; Sandler et al., 2005). There are many benefits to making cultural adaptations that include the potential to address local needs, increase community ownership, and enhance uptake and increase cultural relevance (Botvin, 2004; Dusenbury, Brannigan, Falco, & Hansen, 2003). However, there is little in the research indicating the specific needs for high school students of Hispanic and non-Hispanic ethnicities all residing at the same school.

Prevention programs developed among and for poor, inner-city, Hispanic youth may be inappropriate when transported to middle-class, suburban white youth (Griner & Smith, 2006). The images used in prevention programs, including the narratives and values reflected in activities such as roleplays and discussions, are unlikely to resonate with minority populations and may not be maximally effective for engaging and motivating youth who do not recognize themselves or their lives in the depictions (Hecht & Krieger 2006; Hohmann & Shear 2002).

This current study has many implications for schools with high proportions of Hispanic youth, particularly in the northeast. Prevention techniques could be tailored for Hispanic youth to underscore certain techniques for alcohol use avoidance, such as decreasing stress related to school performance. For non-Hispanic youth, spending time assisting other friends in crisis may lead to opportunities to drink alcohol. However, an emphasis on the “wrongness” of drinking at the high-school level may lead to less alcohol use for non-Hispanic youth. For both non-Hispanic and Hispanic youth, discussing culturally appropriate ways to avoid opportunities to use alcohol with peers is likely to have the largest effect on decreasing alcohol use.

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