University of Cincinnati

Date: 3/14/2014

I, Ashley Merianos, hereby submit this original work as part of the requirements for the degree of Doctor of Philosophy in Health Education.

It is entitled:
Parent Factors and School Factors associated with Alcohol Use among Hispanic Youth

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Parent Factors and School Factors associated with Alcohol Use among Hispanic Youth

A dissertation submitted to the
Graduate School
of the University of Cincinnati
in partial fulfillment of the
requirements for the degree of

DOCTOR OF PHILOSOPHY

In the Department of Health Promotion and Education
Of the College of Education, Criminal Justice, and Human Services

April 2014
by

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Abstract

AN ABSTRACT OF THE DISSERTATION FOR THE DOCTOR OF PHILOSOPHY
DEGREE IN HEALTH PROMOTION AND EDUCATION, PRESENTED ON MARCH 14,
2014 AT THE UNIVERSITY OF CINCINNATI, CINCINNATI, OH

TITLE: Parent Factors and School Factors associated with Alcohol Use among Hispanic Youth

DOCTORAL COMMITTEE MEMBERS: Dr. Keith A. King (chair), Dr. Rebecca A. Vidourek,
and Dr. Laura A. Nabors

This dissertation consists of two studies. Study one examined recent alcohol use and
binge drinking based on authoritative parenting among Hispanic youth. Study two examined
recent alcohol use and binge alcohol use based on school experiences among Hispanic youth.

Study One Abstract

Introduction: The primary aim of this study was to examine the relationship of recent
alcohol use, binge drinking (past 30 days) and authoritative parenting among Hispanic youth.

Methods: A secondary data analysis of the 2012 National Survey on Drug Use and Health was
conducted in the present study. All Hispanic participants from 12 to 17 years of age (N = 3,457)
completed the survey. The university-based Institutional Review Board granted approval to
conduct this study. Results: A total of 13.8% of Hispanic youth reported recent alcohol use, and
8.0% of these participants reported binge drinking. Hispanic youth who reported having low
authoritative parenting was at significantly increased odds for reporting both recent alcohol use
and binge drinking. Specifically, Hispanic youth with low authoritative parenting that were at
increased risk for reporting alcohol use included males, females, the age group 14 to 15 years,
and the age group 16 to 17 years compared to their counterparts with high authoritative
parenting. There were no significant differences found among Hispanic youth in the age group
12 to 13 years. Discussion: Hispanic youth with high authoritative parenting were at reduced risk for reporting recent alcohol use and binge drinking.

Study Two Abstract

Introduction: The primary purpose of this study was to determine if recent alcohol use and binge drinking (past 30 days) was associated with school experiences among Hispanic youth from 12 to 17 years of age. Methods: A secondary data analysis of 2012 National Survey on Drug Use and Health (NSDUH) was performed in the present study. The NSDUH was administered in English and Spanish by trained interviewers to Hispanic youth participants (N = 3,457) in the privacy of their own homes. The university-based Institutional Review Board approved the present study. School experiences were defined by high and low scores. High school experiences reflected positive school experiences and low school experiences reflected negative school experiences. Results: A total of 13.8% of Hispanic youth participants reported recent alcohol use, and 8.0% of participants reported that they had engaged in binge drinking. Hispanic youth who reported having negative school experiences was at increased odds for reporting recent alcohol use and binge drinking compared to their counterparts with positive school experiences. Specifically, Hispanic students who were at highest risk for reporting recent alcohol use and binge drinking were males, females, the age group of 14 to 15 years, and the age group 16 to 17 years who reported having negative school experiences compared to their counterparts who reported having positive school experiences. There was no significant difference found among Hispanic youth from 12 to 13 years. Discussion: These findings based on school experiences should be considered when developing and implementing school-based prevention programs targeting Hispanic youth.
Acknowledgements

I am truly indebted and grateful to Dr. Keith King for his valuable guidance and support throughout the dissertation process and my overall educational journey. I truly appreciate your enthusiasm, advising, and overall time that you have spent with me. I would also like to express my deepest gratitude to Dr. Rebecca Vidourek for her continued support and direction throughout this project. I am very grateful for the time and effort you have spent with me throughout my graduate education. To Dr. Laura Nabors, I would like to thank you for all of your encouragement and helpful insight throughout my dissertation. I truly appreciate your perspective and willingness to help throughout this process and my education. I am very grateful to have such a dynamic, supportive team from the preparation to completion of this study. Finally, I would like to thank my amazing family for their support throughout my education.
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Study One: Alcohol Use by Authoritative Parenting among Hispanic Youth
INTRODUCTION

Underage alcohol use and abuse continues to remain a significant public health problem among Hispanic youth in the United States (Substance Abuse and Mental Health Services Administration [SAMHSA], 2012). Data from the most recent Youth Risk Behavior Surveillance System (YRBSS) (Centers for Disease Control and Prevention [CDC], 2011) indicated that 73.2% of Hispanic youth reported consuming alcohol at least once in their lifetime, compared to 71.7% of white youth and 63.5% of black youth. Regarding recent alcohol use, 42.3% of Hispanic youth reported using alcohol on at least one day during the month before completing the survey, compared to 40.3% of white youth and 30.5% of black youth. Nearly one in four (24.4%) Hispanic youth reported binge drinking, defined as five or more alcoholic beverages in a row within a couple of hours, during the month prior to the survey, compared to 24.0% of white youth and 12.4% of black youth. These data demonstrate that Hispanic youth are at very high risk for reporting alcohol use.

Early Alcohol Use among Hispanic Youth

Alarming statistics from the YRBSS revealed that Hispanic youth are more likely than white youth and black youth to initiate early alcohol use for the first time before 13 years of age, drive when drinking alcohol, ride with a driver who had been drinking alcohol, and drink on school property during the month prior to taking the survey (CDC, 2011). Concerning the Hispanic youth population reporting early age of initiation and higher rates of alcohol use compared to their non-Hispanic counterparts, early alcohol use has been linked to increased involvement in multiple risky behaviors including violent behaviors and suicidal behaviors (Hingson, Heeren, & Winter, 2006; Swahn & Bossarte, 2007; Wu et al., 2004). Early age of first use is also a significant predictor of future alcohol-related problems, including alcohol abuse and
dependence (Grant, Stinson, & Harford, 2001). Consequently, the odds of these alcohol-related problems decrease each year alcohol use is delayed among youth.

**Risk Factors for Alcohol Use among Youth**

Low self-esteem, high rates of delinquency, and aggressive behaviors have been associated with youth alcohol use (Bossarte & Swahn, 2008; King, Vidourek, Haag, & Merianos, 2012). Additionally, youth who lack proper communication skills and decision-making skills may be more likely to use alcohol (Stephens et al., 2009). Youth who have easy access to substances also increases the odds of underage use (Johnston, O’Malley, Bachman, & Schulenberg, 2012). The most recent Monitoring the Future Survey trends illustrated that as drinking increased age also increased, placing older adolescents at higher risk of reporting alcohol use (Johnston et al., 2012). Rates of substance use among youth frequently align with their overall perceived risk of substances, suggesting that youth who associate lower perceived risk of using alcohol substantially increases their likelihood to actually use alcohol (SAMHSA, 2012). Interpersonal risk factors include youth who highly perceive that their peers drink frequently and that their peers approve of alcohol use (D’Amico & McCarthy, 2006). Another strong predictor of alcohol use is having friends who engage in alcohol use and other drugs (Belendiuk, Molina, & Donovan, 2010) and engage in other defiant behaviors (Belendiuk et al., 2010; Search Institute, 2004).

**Family-Related Factors for Alcohol Use among Youth**

Regarding family-related risk factors, youth are at increased risk for using alcohol if their parents have high levels of alcohol use or if their parents have alcohol-related problems (Hussong, Huang, Serrano, Curran, & Chassin, 2012; Maradiegue, 2010). Adolescents are also more likely to drink if they thought their parents encouraged drinking or if their parents were
unaware of them drinking (Marsden et al., 2005). Thus, low levels of parental involvement and limited parental monitoring increases risk for alcohol use among youth (Coatsworth, Pantin, & Szapocznik, 2002; Vaughan, Kratz, & d’Argent, 2011). A culturally-related risk factor for specifically Hispanic youth, that may contribute to underage alcohol use especially among males, is linked to gender role expectations shared among traditional Hispanic families. Particularly, Hispanic males are expected to express masculinity or machismo in their traditional culture by consuming alcohol, whereas females should abstain from alcohol use (Raffaelli & Ontai, 2004; Torres Stone & Meyler, 2007). Interestingly, school prevention programs that incorporate family components, such as how to strengthen family management practices, may have protective influences that reduce substance use among general youth (Spoth, Randall, Trudeau, Shin, & Redmond, 2008). Specifically, family-related protective factors include high family connectedness and clear and consistent rules set against substance use (Search Institute, 2004).

**Parenting Styles and Alcohol Use among Youth**

Different parenting styles may also influence youth’s well-being and behaviors (Baumrind, 1971; Steinberg, 2001). Baumrind (1971) coined parenting styles based on dimensions of parent-child interactions including parental control and parental warmth. In detail, the authoritarian parenting style is high on demandingness and low on responsiveness, and the permissive parenting style of parenting is high on responsiveness and low on demandingness. Authoritative parenting is high on demandingness and high on responsiveness. To add to Baumrind’s (1971) parenting styles, Maccoby and Martin (1983) added a neglectful parenting style, which is low on demandingness and low on responsiveness. Previous research conducted on parenting styles has indicated that adolescents mostly benefit from parents who demonstrate authoritative parenting (Steinberg, 2001). For example, adolescents who experience
authoritative parenting tend to report lower involvement in delinquent and problematic behaviors (Demuth & Brown, 2004). Another study comparing the authoritative parenting style and neglective parenting style found that youth whose mothers had an authoritative parenting style decreased their youth’s likelihood of reporting drinking to the point of drunkenness and binge drinking (Shakya, Christakis, & Fowler, 2012). Moreover, Bahr and Hoffman (2010) found that youth whose parents with an authoritative style had a direct and indirect relationship with reducing the risk of heavy alcohol use, even if their peers had used alcohol. Regarding Hispanic youth, those who highly respect their parents are significantly less likely to use alcohol (Gil, Wagner, & Vega, 2000). Interestingly, Mexican-origin immigrant youth who experienced authoritative parenting styles reported lower levels of depression, delinquency, and alcohol-related problems (Driscoll, Russel, & Crockett, 2008). Future research is needed to explore if authoritative parenting styles impact Hispanic youth from all origins.

Although the field of alcohol prevention has made progress in recent years, most prevention programs lack the capability to directly address the special needs of high-risk populations including Hispanic youth (Marsiglia et al., 2012). To date, limited research has been conducted on specific risk and resiliency factors for Hispanic youth. An extensive review of the literature yielded few studies assessing alcohol use among Hispanic youth and associated variables (Unger, Ritt-Olson, Wagner, Soto, & Baezconde-Garbanati, 2009). The Hispanic population is the largest minority group in the U.S. (U.S. Census Bureau, 2014), and research to reduce health disparities among this rapidly growing population is necessary. Overall, cultural factors may empower substance abuse prevention and education programs to better serve minority youth (Yasui & Dishion, 2007). The cultural characteristics of Hispanic families may enhance protective influences among this particular group (Sale et al., 2005). Therefore,
examining the potential impact authoritative parenting may have on alcohol use among this high-risk population is warranted.

**Study Purpose**

Because alcohol use is disproportionately affecting Hispanic youth and parent-related factors may reduce alcohol use among Hispanic youth (King & Vidourek, 2010), additional research should investigate the authoritative parenting style. Therefore the proposed study will seek to fill such gaps in the research and provide health professionals with specific information that could be used in tailoring programs targeting these youth. The primary aim of this study is to analyze data from the 2012 National Survey on Drug Use and Health (NSDUH) to examine the relationship of authoritative parenting, recent alcohol use and binge drinking (past 30 days) among Hispanic youth from 12 to 17 years of age. Specifically, the following research questions will be investigated:

1) What percent of Hispanic youth aged 12 to 17 years engage in recent alcohol use and binge drinking?

2) Does recent alcohol use and binge drinking differ based on:
   a. Sex? (males and females)
   b. Age category? (12 to 13 years, 14 to 15 years, and 16 to 17 years)

3) Does recent alcohol use and binge drinking by authoritative parenting differ based on:
   a. Sex? (males and females)
   b. Age category? (12 to 13 years, 14 to 15 years, and 16 to 17 years)

4) Does low authoritative parenting increase the odds for recent alcohol use and binge drinking among Hispanic youth?
5) Does low authoritative parenting increase the odds for recent alcohol use and binge drinking for Hispanic male and female youth?

6) Does low authoritative parenting increase the odds for recent alcohol use and binge drinking for Hispanic youth in the three age categories (12 to 13 years, 14 to 15 years, and 16 to 17 years)?

METHODS

Participants

Participants in this study were 12 to 17 year old Hispanic youth (N = 3,457) from all United States including the District of Columbia. All participants were recruited for the NSDUH by the Research Triangle Institute (RTI) using multistage area probability sampling methods to select representative samples of U.S. noninstitutionalized civilians. All youth participation was voluntary. If parents did not wish to have their children participate or children did not wish to participate, they were excluded from the computer-assisted interview. The Institutional Review Board granted approval for the current study.

Instrument

A secondary data analysis of the 2012 NSDUH was conducted in the present study. The NSDUH instrument was designed by the U.S. Federal Government to provide nationwide annual data on substance use behaviors among individuals 12 years of age and older. The following NSDUH survey sections/items were used in the present study: (1) Personal/family Information; (2) Alcohol Use; and (3) Authoritative Parenting. The Alcohol Use subscale consisted of two imputation revised items. Statistical imputation was used to substitute any missing or ambiguous data including replacing missing values with non-missing values, and ambiguous values were
replaced with definite values when there was no definite period of substance use reported within the participant’s lifetime. For assessing overall alcohol use of participants, youth were required to respond if they had used alcohol, (1) within the past 30 days, (2) more than 30 days but within the past 12 months, (3) more than 12 months ago, or (4) never used alcohol. For the purpose of this study, recent alcohol use was defined as the category of having used alcohol within the past 30 days of taking the survey. For binge drinking, youth were asked another question about if they had consumed five or more drinks on the same occasion, defined as at the same time or within a couple of hours of each other, during the past 30 days of completing the survey.

The Authoritative Parenting subscale located in the Youth Experiences section of the survey consisted of seven items asking youth about their parents including biological parents, adoptive parents, stepparents, or adult guardians who lived in their household. Authoritative parenting is defined as exerting high control and discipline with high responsiveness and warmth (Baumrind, 1978). The Authoritative Parenting subscale items required youth participants to rate how often their parents performed seven behaviors within the 12 months on a four-point scale (1 = “always”; 2 = “sometimes”; 3 = “seldom”; 4 = “never”): (1) “During the past 12 months, how often did your parents check on whether you had done your homework?,” (2) “During the past 12 months, how often did your parents provide help with your homework when you needed it?,” (3) “During the past 12 months, how often did your parents make you do chores around the house?,” (4) “During the past 12 months, how often did your parents limit the amount of time you watched TV?,” (5) “During the past 12 months, how often did your parents limit the amount of time you went out with friends on school nights?,” (6) “During the past 12 months, how often did your parents let you know when you’d done a good job?,” (7) “During the past 12 months, how often did your parents tell you they were proud of you for something you had done?”. The
Personal/family Information subscale required youth to respond to their ethnicity, and all youth self-identified as Hispanic were included in the present study. The computer-assisted interview has been tested for validity and reliability and has percent agreements of greater than 80% on most variables (Chromy et al., 2010; Fendrich, Johnson, Sudman, Wislar, & Spiehler, 1999; Gfroerer, Eyerman, & Chromy, 2002).

**Procedures**

The NSDUH is sponsored by the Substance Abuse and Mental Health Services Administration (SAMHSA) and U.S. Department of Health and Human Services. Youth were administered the computer-assisted interviews in their households after being informed of the study purpose, voluntary nature of the survey, confidentiality of responses, and importance of providing honest and accurate answers. Prior to participation, professional RTI interviewers \((n = 665)\) made personal visits to the selected households. Once a household was selected, no substitutions were permitted for any reason to ensure NSDUH data represented multiple types of individuals in the U.S. Upon being asked a few general questions during the in-person household visit by RTI interviewers, the interviewers may have asked one or two household residents to participate in the study by completing the computer-assisted interview. During the visit, no household residents may have been asked to participate. Regarding the selected participants asked to participate, their participation was voluntary and no other household resident could have taken the requested interviewees place. The NSDUH survey could be completed in an English or Spanish version. A certified bilingual interpreter administered the Spanish version that had the same content as the English version. Most participants answered the questions in private and entered their responses directly into the laptop computer so interviewers did not know the answers entered. They did not need to have prior computer skills.
to participate. For some items, interviewers read the questions aloud and entered the responses given into the laptop computer.

Both SAMHSA and RTI were committed to ensuring the confidentiality of all responses. Full names were never recorded or associated with answers given and responses could only be used for statistical purposes. At the end of conducting the computer-assisted interview, the data file was coded and submitted electronically to the RTI on the same day the interviews were conducted. The selected participants received $30 cash incentive upon completion of the interview. As a quality control measure, participants may have received a phone call or letter from RTI to verify that the interviewers completed the interview in a professional manner. The university-based Institutional Review Board granted approval for this study.

**Data Analysis**

Data were entered and analyzed using the Statistical Package for the Social Sciences (SPSS) Version 21. Frequency distributions, means, standard deviations and ranges were used to describe Hispanic youth’s demographic and background characteristics and involvement in recent alcohol use and binge drinking. Chi-square analyses were conducted to determine whether recent alcohol use and binge drinking significantly differed based on sex and age category. Analyses were stratified by sex and age category. A series of odds ratios were computed using logistic regression to determine whether recent alcohol use and binge drinking based on authoritative parenting differed for males, females, age group 12 to 13 years, age group 14 to 15 years, and age group 16 to 17 years. In order to calculate odds ratios, the Authoritative Parenting subscale scores were computed to determine an overall score. This overall score was in turn dichotomized into high and low levels based on median splits (high authoritative
parenting, low authoritative parenting). An alpha level of .05 was utilized for all data analyses to avoid committing a Type I error.

RESULTS

Demographics

A total of 3,457 Hispanic youth from 12 to 17 years of age nationwide completed the survey. Of these youth, 50.1% were Hispanic males \( (n = 1732) \) and 49.9% were Hispanic females \( (n = 1725) \). The sample was trichotomized into age categories with 32.2% of Hispanic youth aged 12 to 13 years \( (n = 1112) \), 34.1% of Hispanic youth aged 14 to 15 years \( (n = 1180) \), and 33.7% of Hispanic youth aged 16 to 17 years \( (n = 1165) \). Overall, a total of 13.8% of Hispanic youth participants reported that they had used alcohol in the past month, and 8.0% of participants reported that they had engaged in binge drinking by consuming five or more alcoholic drinks on the same occasion in the past month of taking the survey.

Hispanic Youth’s Involvement in Recent Alcohol Use and Binge Drinking by Sex and Age Category

Results indicated that 13.2% of Hispanic male youth reported recent alcohol use compared to 14.3% of Hispanic female youth (Table 1). No significant difference was found between Hispanic males and females regarding recent alcohol use in the past month of taking the survey, \( \chi^2 = .883, df = 1, p = .347 \). Similarly, 8.1% of Hispanic male youth reported binge drinking in the past month compared to 8.0% of Hispanic female youth. There was no significant difference found between Hispanic male and female participants regarding binge drinking, \( \chi^2 = 0.010, df = 1, p = .922 \). Concerning age category, 2.5% of participants from 12 to 13 years of age, 13.2% of participants from 14 to 15 years of age, and 25.1% of participants from 16 to 17 years of age reported having used alcohol in the past month. Age category significantly differed
based on recent alcohol use among Hispanic youth, $\chi^2 = 244.040, df = 2, p = <.001$. Hispanic youth from 16 to 17 of age were significantly more likely than the 14 to 15 age group and 12 to 13 age group to use alcohol in the past month, and Hispanic youth from 14 to 15 years of age were significantly more likely to use alcohol in the past month than their younger 12 to 13 year old counterparts. Furthermore, 1.1% of Hispanic youth from 12 to 13 years, 6.9% of Hispanic youth from 14 to 15 years, and 15.7% from 16 to 17 years of age reported that they had engaged in binge drinking in the past month of taking the survey. Similarly, there was a significant difference found between age categories regarding binge drinking with Hispanic youth, $\chi^2 = 167.942, df = 2, p = <.001$. Hispanic youth from 16 to 17 of age were significantly more likely than the 14 to 15 year age group and the 12 to 13 age group to binge drink, and Hispanic youth from 14 to 15 years of age were significantly more likely to report binge drinking than their younger 12 to 13 year old counterparts.

**Recent Alcohol Use and Binge Drinking by Authoritative Parenting among Hispanic Youth**

Logistic regression was used to calculate odds ratios and determine whether recent alcohol use and binge drinking based on authoritative parenting significantly differed among Hispanic youth. The results showed that 17.2% of Hispanic youth with low authoritative parenting reported recent alcohol use compared to one-tenth (10.1%) of Hispanic youth with high authoritative parenting. Recent alcohol use significantly differed based on authoritative parenting among Hispanic youth participants, $\chi^2 = 36.319, df = 1, p = <.001$ (Table 2). Results indicated that Hispanic youth with low authoritative parenting were at increased odds and were more than half times likely (OR = .543; 95% CI = [.444, .663]) to report recent alcohol use than Hispanic youth with high authoritative parenting. Concerning binge drinking, one-tenth (10.2%) of Hispanic youth with low authoritative parenting reported binge drinking in the past month.
compared to 5.7% of Hispanic youth with high authoritative parenting. Similar to the recent alcohol use findings, binge drinking significantly differed based on authoritative parenting among Hispanic youth participants, $\chi^2 = 24.018, df = 1, p = <.001$. Specifically, Hispanic youth participants with low authoritative parenting were at increased odds and were more than half times likely (OR = .530; 95% CI = [.410, .685]) to report binge drinking compared to their Hispanic youth counterparts with high authoritative parenting.

**Recent Alcohol Use and Binge Drinking by Authoritative Parenting among Hispanic Male and Female Youth**

The results indicated that 15.8% of Hispanic males with low authoritative parenting reported recent alcohol use compared to one-tenth (10.5%) of Hispanic males with high authoritative parenting. Recent alcohol use significantly differed based on authoritative parenting among Hispanic male youth participants, $\chi^2 = 10.536, df = 1, p = .001$ (Table 3). Results indicated that Hispanic male youth with low authoritative parenting were at increased odds and were more than half times likely (OR = .626; 95% CI = [.470, .832]) to report recent alcohol use compared to Hispanic male youth with high authoritative parenting. Concerning binge drinking, more than one-tenth (10.3%) of Hispanic male youth with low authoritative parenting reported binge drinking in the past month compared to 5.7% of Hispanic male youth with high authoritative parenting. Similar to the recent alcohol use findings, binge drinking significantly differed based on authoritative parenting among Hispanic male youth participants, $\chi^2 = 2.405, df = 1, p = <.001$. Specifically, Hispanic male youth participants with low authoritative parenting were at increased odds and were more than half times likely (odds ratio = .526; 95% CI = [.366, .756]) to report binge drinking in the past month compared to Hispanic male youth with high authoritative parenting.
Regarding Hispanic female youth participants, results revealed that nearly one-fifth (18.6%) of Hispanic females with low authoritative parenting compared to nearly one-tenth (9.8%) of Hispanic females with high authoritative parenting reported recent alcohol use. Recent alcohol use significantly differed based on authoritative parenting among Hispanic female youth participants, $\chi^2 = 27.202$, $df = 1$, $p = .001$ (see Table 3). Results indicated that Hispanic female youth with low authoritative parenting were at increased odds and were nearly half times likely (OR = .475; 95% CI = .357, .631) to report recent alcohol use compared to Hispanic female youth with high authoritative parenting. Concerning binge drinking, more than one-tenth (10.1%) of Hispanic female youth with low authoritative parenting reported binge drinking in the past month compared to 5.7% of Hispanic female youth with high authoritative parenting. Similar to the recent alcohol use findings, binge drinking significantly differed based on authoritative parenting among Hispanic female youth participants, $\chi^2 = 11.635$, $df = 1$, $p = .001$. Specifically, Hispanic female youth participants with low authoritative parenting increased the odds and were more than half times likely (OR = .534; 95% CI = [.370, .769]) to report binge drinking compared to Hispanic female youth participants with high authoritative parenting.

**Recent Alcohol Use and Binge Drinking by Authoritative Parenting among Hispanic Youth by Age Category**

The results indicated that 2.6% of Hispanic youth from 12 to 13 years of age with low authoritative parenting reported recent alcohol use compared to 2.4% of Hispanic youth in the same age group with high authoritative parenting. Recent alcohol use did not significantly differ based on authoritative parenting among Hispanic youth from 12 to 13 years of age, $\chi^2 = 0.048$, $df = 1$, $p = .826$. Results indicated that Hispanic youth from 12 to 13 years of age with low authoritative parenting were nearly one times likely (OR = .919; 95% CI = [.433, 1.951]) to
report recent alcohol use compared to Hispanic youth in the same age group with high authoritative parenting. Concerning binge drinking, 1.4% of Hispanic youth from 12 to 13 years of age with low authoritative parenting reported binge drinking in the past month compared to 0.8% of their same-age Hispanic youth counterparts with high authoritative parenting. Similar to recent alcohol use findings, there was no significant difference found between binge drinking and authoritative parenting among this youngest age group, $\chi^2 = 0.955, df = 1, p = .328$. Hispanic youth from 12 to 13 years of age with low authoritative parenting were half times likely (OR = .567; 95% CI = [.179, 1.797]) to report binge drinking than their same-age counterparts with high authoritative parenting.

Regarding the middle age category, 16.6% of Hispanic youth from 14 to 15 years of age with low authoritative parenting reported recent alcohol use compared to 9.7% of Hispanic youth in the same age group with high authoritative parenting. Recent alcohol use significantly differed based on authoritative parenting among Hispanic youth from 14 to 15 years of age, $\chi^2 = 12.092, df = 1, p = .001$. Results indicated that Hispanic youth from 14 to 15 years of age with low authoritative parenting were more than half times likely (OR = .542; 95% CI = [.382, .768]) to report recent alcohol use compared to Hispanic youth from 14 to 15 years of age with high authoritative parenting. Concerning binge drinking, 9.0% of Hispanic youth from 14 to 15 years of age with low authoritative parenting reported binge drinking in the past month compared to 4.8% of their same-age Hispanic youth counterparts with high authoritative parenting. Similar to recent alcohol use findings, binge drinking significantly differed based on authoritative parenting among this middle age category, $\chi^2 = 8.060, df = 1, p = .005$. Specifically, Hispanic youth from 14 to 15 years of age with low authoritative parenting were half times likely (OR = .509; 95% CI =
Results of the oldest age category from 16 to 17 years found that 28.4% of these Hispanic youth with low authoritative parenting reported recent alcohol use compared to 20.5% of Hispanic in the same age group with high authoritative parenting. Recent alcohol use significantly differed based on authoritative parenting among Hispanic youth from 16 to 17 years of age, $\chi^2 = 9.392, df = 1, p = .002$. Results indicated that Hispanic youth from 16 to 17 years of age with low authoritative parenting were more than half times likely (OR = .650; 95% CI = [.492, .857]) to report recent alcohol use compared to Hispanic youth from 16 to 17 years of age with high authoritative parenting. Concerning binge drinking, 17.7% of Hispanic youth from 16 to 17 years of age with low authoritative parenting reported binge drinking in the past month compared to 13.0% of their same-age Hispanic youth counterparts with high authoritative parenting. Similar to the recent alcohol use findings, binge drinking significantly differed based on authoritative parenting among the oldest age category, $\chi^2 = 4.713, df = 1, p = .030$. Specifically, Hispanic youth from 16 to 17 years of age with low authoritative parenting were more than half times likely (OR = .695; 95% CI = [.499, .966]) to report binge drinking than their same-age counterparts with high authoritative parenting.

**DISCUSSION**

The present study found that Hispanic youth continue to be affected by recent alcohol use and binge drinking (SAMHSA, 2012). The results indicated that 13.8% of Hispanic youth aged 12 to 17 years nationwide reported recent alcohol use and 8.0% of these youth reported binge drinking by consuming five or more alcoholic drinks on the same occasion in the past month of
taking the survey. These rates are alarming especially since adolescent youth are at increased risk for future substance abuse and alcohol use disorders (Grant et al., 2001; Windle & Zucker, 2010). Unfortunately, limited prevention efforts have been implemented and evaluated for Hispanic youth populations (Johnston et al., 2012; Prado & Pantin, 2011). The fact that a sizeable percentage of Hispanic youth from 12 to 17 years reported recent alcohol use and binge drinking suggests that nationwide prevention efforts are clearly warranted.

**Recent Alcohol Use and Binge Drinking based on Sex**

Contrary to previous research that speculates that Hispanic male youth are traditionally more likely to report alcohol use than Hispanic female youth (Torres Stone & Meyler, 2007), the present study did not find sex differences regarding recent alcohol use or binge drinking. This finding is surprising because gender socialization differences exist among the traditional Hispanic culture, such as Hispanic males using alcohol as a common way to express *machismo* or masculinity compared to Hispanic females who should abstain from alcohol use (Raffaelli & Ontai, 2004; Torres Stone & Meyler, 2007). Even though a significant difference was not found, it is important to note that females (14.3%) reported similar rates of using alcohol within the past 30 days of completing the survey compared to their male counterparts (13.2%) in the current study. This finding underscores the need to educate and raise awareness of the deleterious effects of alcohol by targeting both Hispanic male and female youth. Interestingly, previous research indicates that improving connections between females and their parents has a positive long-term impact on delaying and reducing alcohol use (Sale et al., 2005). Future studies should more thoroughly examine if any gender differences exist regarding the impact that alcohol prevention efforts including parent components may have in order to move towards evidence-based practices for this high-risk youth population.
Recent Alcohol Use and Binge Drinking based on Age Category

The present study revealed that recent alcohol use and binge drinking significantly differed based on age category. Trends of recent alcohol use rates increased by age category from 2.5% in the youngest age group, to 13.2% in the middle age group, to 25.1% in the oldest age category. Similarly, binge drinking rates increased by age category from 1.1% from 12 to 13 years, to 6.9% from 14 to 15 years, to 15.87% from 16 to 17 years. The current study’s results are similar to previous nationwide trends, which indicated that as grade levels increased, alcohol use rates increased (Johnston et al., 2012). Such findings are important for delivering early prevention and intervention programs because of youth from 12 to 13 years of age reported using alcohol, regardless of having lower rates compared to their older age group counterparts. This is especially true since early alcohol initiation is particularly high among Hispanic youth (Johnston et al., 2012). Consequently, drinking during pre-adolescent years has been strongly associated with high levels of alcohol use during late adolescent years and adult years (Wilson, Battistich, Syme, & Boyce, 2002). Early alcohol use has also been linked with subsequent physiological effects, including alcohol use disorders (Windle & Zucker, 2010). Early prevention efforts are essential to avoid these serious alcohol-related problems developed later on.

Recent Alcohol Use and Binge Drinking based on Authoritative Parenting

The significant impact the authoritative parenting style had on alcohol use among Hispanic youth should be underscored. Hispanic youth with low authoritative parenting were at elevated risk for reporting recent alcohol use and binge drinking. In fact, Hispanic youth with low authoritative parenting were more than half times likely to report recent alcohol use and binge drinking compared to those who reported experiencing high authoritative parenting. Authoritative parenting behaviors (Baumrind, 1978) are highly encouraged by the National
Institute on Alcohol Abuse and Alcoholism (2013) to reduce alcohol use among youth. Previous research has coupled retaining Hispanic cultural factors, specifically related to Hispanic family traditions, to lower levels of substance use (Castro, Stein, & Bentler, 2009). High family connectedness and parental warmth have protective effects within the Hispanic population against substance use (Sale et al., 2005). Alcohol prevention programs should consider including parents and teaching them the importance of adopting authoritative parenting skills, including helping their youth with homework, making sure homework is complete, limiting the amount of time spent with friends on school nights, and even the amount of TV their youth watch. Among general youth populations, incorporating education on assertive parenting practices into school substance use prevention programs significantly increased adolescent attachment to parental values, parental rule setting and monitoring overtime (Latendresse et al., 2008; Spoth et al., 2008). High authoritative parenting such as parental monitoring, promotes decreased unstructured socialization with peers and has been significantly associated with later alcohol initiation and overall reduced alcohol use among youth (Bahr & Hoffman, 2010; Bourdeau, Miller, Duke, & Ames, 2011; Chen, Grube, Nygaard, & Miller, 2008; Shakya et al., 2012).

Programs should focus on increasing the parent-child connections between Hispanic youth and their parents.

**Recent Alcohol Use and Binge Drinking by Authoritative Parenting based on Sex**

Authoritative parenting was found to be significantly associated with recent alcohol use and binge drinking for both male and female youth. Specifically, Hispanic male youth and female youth who reported experiencing low authoritative parenting were at greater risk of recent alcohol use and binge drinking than their counterparts who reported experiencing high authoritative parenting. A study conducted by Yan, Beck, Howard, Shattuck, and Kerr (2008)
found that high family connectedness decreased the negative impact peer norms had on adolescent drinking for both males and females. As aforementioned, this is not surprising since previous literature have indicated that family connectedness and parental warmth are protective factors for youth (Mogro-Wilson, 2008; Sale et al., 2005). A meta-analysis of randomized controlled trials examining the effectiveness of alcohol interventions in reducing adolescent drinking found that simultaneously targeting both youth and their parents was effective in reducing alcohol initiations (Smit, Verdurmen, Monshouwer, & Smit, 2008). The present study adds to the literature by identifying the authoritative parenting style as a protective factor for alcohol use among Hispanic youth regardless of sex, in addition to recognizing the role the parent may have in prevention efforts for these youth. Educating parents on the positive effects authoritative parenting styles has on youth alcohol use should be included in prevention initiatives.

**Recent Alcohol Use and Binge Drinking by Authoritative Parenting based on Age Category**

Youth who reported low authoritative parenting increased the odds by more than half times for recent alcohol use and binge drinking among the two older age groups (14 to 15 years and 16 to 17 years) in the present study. Interestingly, alcohol use did not significantly differ based on authoritative parenting among the youngest age group (12 to 13 years). Perhaps this finding was due to the small prevalence of these Hispanic youth who reported engaging in recent alcohol use (5%) and binge drinking (2.2%). Although there was not a significant difference, the present study found that Hispanic youth from 12 to 13 years of age who reported having low authoritative parenting were at increased odds to report both recent alcohol use and binge drinking compared to their counterparts with high authoritative parenting. A longitudinal study conducted by Kam, Potocki, and Hecht (2012) found that Mexican-heritage male and female
youth from sixth to eighth grades were more likely to consider the negative consequences associated with alcohol consumption when engaged in targeted parent-child communication against alcohol. Former research has also revealed that youth find value in having increased discussion about alcohol use with their parents (Coleman & Cater, 2005), and that Hispanic parents communicating their disapproval of alcohol use has been associated with reduced alcohol use and age of onset among their youth (King & Vidourek, 2010). High parental involvement and parental monitoring has had direct protective effects by limiting early adolescent drinking progression, and has had indirect protective effects against the number of their adolescents’ peers who drink (Simons-Morton & Chen, 2005). Thus, early prevention initiatives incorporating parent-youth communication on alcohol use may have short-term and long-term benefits.

The current study identified that Hispanic youth who reported experiencing high authoritative parenting were at reduced risk for reporting recent alcohol use and binge drinking. The traditional Hispanic culture is more collectivist in nature and holds a strong emphasis on the family unit naturally promoting authoritative parenting behaviors, compared to the individuation from parents that are frequently perceived among the American culture (Myers et al., 2009). Additionally, previous research indicates that similar parent-adolescent Hispanic acculturation patterns and preferences may also play an important role in reducing underage alcohol use overtime (Unger et al., 2009). Therefore, less acculturated youth to the American culture may be more influenced by their parents compared to their more acculturated peers who are more proficient in speaking English. A study conducted by Guilamo-Ramos, Jaccard, Johansson, and Turrisi (2004) found that Hispanic youth who had no prior history of alcohol consumption were unaffected by acculturation factors. Conversely, Hispanic youth who reported prior history of alcohol consumption and had mostly lived in the United States and lived in English-speaking
homes use were at increased the likelihood of binge drinking as adolescents became older (Guilamo-Ramos et al., 2004). Program evaluations of interventions that incorporate culturally specific information increase the effectiveness of substance use efforts and assist in reducing the overall use of alcohol for Hispanic youth (Kulis et al., 2005). As such, research should explore the potential impact authoritative parenting may have on acculturation by Hispanic origins.

**Limitations**

The limitations to this study should be noted. First, the study involved a survey of self-reported responses. Some youth from 12 to 17 years of age may have responded in socially desirable ways. Second, causal relationships could not be determined from using cross-sectional data. Finally, participants of this study included Hispanic youth from 12 to 17 years of age and therefore caution should be exercised in generalizing study findings to youth of other race/ethnicities or the adult population.

**Conclusions**

Results from this study can be used to assist prevention specialists and health educators in more thoroughly understanding the potential impact authoritative parenting has on Hispanic youth involvement in recent alcohol use and binge drinking. In turn, findings can aid professionals in developing effective prevention programs and evidence-based efforts for this high-risk population. Specifically, the present study suggests that including information on authoritative parenting in substance use prevention programs may aid in preventing Hispanic youth from engaging in alcohol use. In addition, teaching authoritative parenting behaviors among Hispanic parents will assist in keeping their youth from engaging in underage drinking. As there were no difference found between males and female regarding alcohol use, suggesting that traditional Hispanic gender expectations are not being frequently adopted, future studies
should explore levels of acculturation and seek to identify how to properly enhance cultural sensitivity and appeal of prevention programs for these youth. One strategy to avoid any potential issues related to acculturation in prevention programs, encouraging Hispanic youth to bond with their parents. Future studies should seek to identify if ethnic subgroup differences exist regarding recent alcohol use and binge drinking by authoritative parenting for a more thorough understanding for prevention efforts for Hispanic youth nationwide.
References


Centers for Disease Control and Prevention ([CDC], 2011). Youth risk behavior surveillance system: Selected 2011 national health risk behaviors and health outcomes by race/ethnicity. *Centers for Disease Control and Prevention.*


Substance Abuse and Mental Health Services Administration ([SAMHSA], 2012). Results from 2012 National Survey on Drug Use and Health: Summary of national findings. *U.S. Department of Health and Human Services.*


<table>
<thead>
<tr>
<th>Item</th>
<th>Recent Alcohol Use</th>
<th>Binge Drinking</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Did Not Use in</td>
<td>Used in</td>
<td></td>
<td></td>
<td>Did Not Use in</td>
<td>Used in</td>
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<tr>
<td></td>
<td>Past Month n (%)</td>
<td>Past Month n (%)</td>
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<td></td>
<td>Past Month n (%)</td>
<td>Past Month n (%)</td>
<td></td>
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<tr>
<td></td>
<td>n (%)</td>
<td>p</td>
<td></td>
<td></td>
<td>n (%)</td>
<td>p</td>
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<td></td>
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</tr>
<tr>
<td>Female</td>
<td>1,484 (85.7)</td>
<td>248 (14.3)</td>
<td></td>
<td></td>
<td>1,594 (92.0)</td>
<td>138 (8.0)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1,497 (86.8)</td>
<td>228 (13.2)</td>
<td>.347</td>
<td></td>
<td>1,586 (91.9)</td>
<td>139 (8.1)</td>
<td>.922</td>
<td></td>
</tr>
<tr>
<td>Age Category</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12 to 13</td>
<td>1,084 (97.5)</td>
<td>28 (2.5)</td>
<td></td>
<td></td>
<td>1,100 (98.9)</td>
<td>12 (1.1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>years</td>
<td>1,024 (86.8)</td>
<td>156 (13.2)</td>
<td></td>
<td></td>
<td>1,098 (93.1)</td>
<td>82 (6.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14 to 15</td>
<td>1,084 (97.5)</td>
<td>28 (2.5)</td>
<td></td>
<td></td>
<td>1,100 (98.9)</td>
<td>12 (1.1)</td>
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</tr>
<tr>
<td>years</td>
<td>1,024 (86.8)</td>
<td>156 (13.2)</td>
<td></td>
<td></td>
<td>1,098 (93.1)</td>
<td>82 (6.9)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16 to 17</td>
<td>873 (74.9)</td>
<td>292 (25.1)</td>
<td>&lt;.001</td>
<td></td>
<td>982 (84.3)</td>
<td>183 (15.7)</td>
<td>&lt;.001</td>
<td></td>
</tr>
<tr>
<td>years</td>
<td></td>
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</tr>
</tbody>
</table>

Notes:
N = 3,457; All categories do not total 3,457 due to missing data; Percents refer to valid percents; Missing values excluded
<table>
<thead>
<tr>
<th>Item</th>
<th>Recent Alcohol Use</th>
<th></th>
<th></th>
<th>Binge Drinking</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Did Not Use in Past Month</td>
<td>Used in Past Month</td>
<td>OR (95% CI)</td>
<td>p</td>
<td>Did Not Use in Past Month</td>
<td>Used in Past Month</td>
</tr>
<tr>
<td>Authoritative Parenting</td>
<td>1,456 (82.8)</td>
<td>303 (17.2)</td>
<td>1.0</td>
<td></td>
<td>1,579 (89.8)</td>
<td>180 (10.2)</td>
</tr>
<tr>
<td>Lowº</td>
<td>1,514 (89.9)</td>
<td>171 (10.1)</td>
<td>.543 (0.444, 0.663)</td>
<td>&lt;.001</td>
<td></td>
<td>1,589 (94.3)</td>
</tr>
</tbody>
</table>

Notes:
º Indicates Referent; N= 3,457; All categories do not total 3,457 due to missing data; Percents refer to valid percents; Missing values excluded
### Table 3. Odds Ratios for Recent Alcohol Use and Binge Drinking based on Authoritative Parenting among Male and Female Hispanic Youth

<table>
<thead>
<tr>
<th>Item</th>
<th>Recent Alcohol Use</th>
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<th>Females</th>
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<tbody>
<tr>
<td></td>
<td>Males</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Did Not Use in Past Month n (%)</td>
<td>Did Not Use in Past Month n (%)</td>
<td>OR (95% CI)</td>
<td>p</td>
</tr>
<tr>
<td>Authoritative</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parenting</td>
<td>Low</td>
<td>725 (84.2)</td>
<td>136 (15.8)</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>767 (89.5)</td>
<td>90 (10.5)</td>
<td>.626 (.470, .832)</td>
</tr>
<tr>
<td>Binge Drinking</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Males</td>
<td>Did Not Binge Use in Past Month n (%)</td>
<td>Binge Used in Past Month n (%)</td>
<td>OR (95% CI)</td>
</tr>
<tr>
<td>Authoritative</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parenting</td>
<td>Low</td>
<td>772 (89.7)</td>
<td>89 (10.3)</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>808 (94.3)</td>
<td>49 (5.7)</td>
<td>.526 (.366, .756)</td>
</tr>
</tbody>
</table>

Notes:
- Indicates Referent; N = 3,457; All categories do not total 3,457 due to missing data; Percents refer to valid percents; Missing values excluded
Table 4. Odds Ratios for Recent Alcohol Use and Binge Drinking based on Authoritative Parenting among Hispanic Youth by Age Category

<table>
<thead>
<tr>
<th>Item</th>
<th>12-13 Years</th>
<th></th>
<th>14-15 Years</th>
<th></th>
<th>16-17 Years</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Did Not Use in Past Month n (%)</td>
<td>Used in Past Month n (%)</td>
<td>OR (95% CI)</td>
<td>p</td>
<td>Did Not Use in Past Month n (%)</td>
<td>Used in Past Month n (%)</td>
</tr>
<tr>
<td><strong>Recent Alcohol Use</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authoritative Parenting Low(^{a})</td>
<td>478 (97.4)</td>
<td>13 (2.6)</td>
<td>1.0</td>
<td></td>
<td>493 (83.4)</td>
<td>98 (16.6)</td>
</tr>
<tr>
<td>High</td>
<td>600 (97.6)</td>
<td>15 (2.4)</td>
<td>.919</td>
<td>(.0433, 1.951)</td>
<td>.826</td>
<td>529 (90.3)</td>
</tr>
<tr>
<td><strong>Binge Drinking</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authoritative Parenting Low(^{a})</td>
<td>484 (98.6)</td>
<td>7 (1.4)</td>
<td>1.0</td>
<td></td>
<td>538 (91.0)</td>
<td>53 (9.0)</td>
</tr>
<tr>
<td>High</td>
<td>610 (99.2)</td>
<td>5 (0.8)</td>
<td>.567</td>
<td>(.0179, 1.797)</td>
<td>.328</td>
<td>558 (95.2)</td>
</tr>
</tbody>
</table>

Notes:
\(^{a}\) Indicates Referent; N = 3,457; All categories do not total 3,457 due to missing data; Percents refer to valid percents; Missing values excluded
Study Two: Alcohol Use by School Experiences among Hispanic Youth
INTRODUCTION

Despite numerous substance use prevention efforts, a sizeable percentage of Hispanic youth continue to be affected by alcohol use (Substance Abuse and Mental Health Services Administration [SAMHSA], 2012). Nearly three-fourths (73.2%) of Hispanic youth have reported using alcohol within their lifetime, compared to 71.7% of white youth and 63.5% of black youth (Centers for Disease Control and Prevention [CDC], 2011). Concerning recent alcohol use, 42.3% of Hispanic youth reported using alcohol in the past month of completing the most current Centers for Disease Control and Prevention’s Youth Risk Behavior Surveillance System (YRBSS), compared to 40.3% of white youth and 30.5% of black youth (CDC, 2011). Approximately one in four (24.4%) Hispanic males (25.9%) and Hispanic females (22.4%) reported engaging in binge drinking, defined as drinking five or more beverages of alcohol in a row within a few hours, during the month prior to YRBSS survey completion. The most recent Monitoring the Future survey indicated that Hispanic youth also begin drinking earlier than white youth (Johnston, O’Malley, Bachman, & Schulenberg, 2012). These alarming statistics highlight the need to focus on alcohol initiatives targeting the Hispanic youth population.

Hispanic youth are more likely than their white and black counterparts to drink before 13 years of age (CDC, 2011). Accordingly, early age of first alcohol use has been related to increased risk of suicidal ideation and attempts, violence, delinquency, and alcohol abuse and dependence (Grant, Stinson, & Harford, 2001; Hingson, Heeren, & Winter, 2006; Swahn & Bossarte, 2007; Wu et al., 2004). Regarding alcohol-related problems, research shows that youth who begin drinking before age 14 are four times more likely to develop alcohol abuse and dependence than those who begin drinking at the legal age of 21 years (Grant et al., 2001). Alcohol use prevention efforts for youth are imperative since the risk for developing these
alcohol-related problems significantly declines each year that alcohol use is postponed.

**Risk Factors for Alcohol Use among Youth**

Risk factors for alcohol use exist on several levels for youth. Individual risk factors for Hispanic youth include having low self-esteem, low perceived social support, low perceived harm of substance use, and frequent engagement in violent and other delinquent behaviors (Bossarte & Swahn, 2008; King, Vidourek, Haag, & Merianos, 2012; Stephens et al., 2009). Associating low perceived harm and low perceived consequences with substance use significantly increases the risk for using substances among youth (SAMHSA, 2012). Alcohol use during the adolescent years has been linked with long-term, physical effects, including but not limited to, impaired brain development and functioning (White & Swartzwelder, 2005) and alcohol use disorders (Windle & Zucker, 2010). Interpersonal risk factors that substantially increase the likelihood of underage alcohol use include youth who perceive that their peers approve of alcohol use and youth who perceive that their peers are alcohol users (Chun, Devall, & Sandau-Beckler, 2013; D’Amico & McCarthy, 2006), and youth who have friends who actually use alcohol and other drugs (Belendiuk, Molina, & Donovan, 2010). In the family, parents who frequently use alcohol or have alcohol-related problems place youth at elevated risk of becoming users themselves (Hussong, Huang, Serrano, Curran, & Chassin, 2012). Particularly among the Hispanic youth population, poor parental monitoring and low parental involvement are potential risk factors associated with substance use (Coatsworth, Pantin, & Szapocznik, 2002; Vaughan, Kratz, & d’Argent, 2011).

**School-Related Risk Factors for Alcohol Use among Youth**

At the school level, having low levels of school connectedness, such as lacking positive feelings towards school and lacking positive connections with peers and school personnel, is a
strong predictor of substance use among general youth populations (Fletcher, Bonell, & Hargreaves, 2008; Thompson, Iachan, Overpeck, Ross, & Gross, 2006). Youth who feel excluded from school and those who are truant are at high risk for reporting frequent drinking behaviors (Marsden et al., 2005). School-related risk factors linked to underage drinking among youth involve lacking adequate support and guidance from teachers and other school personnel (Thompson et al., 2006). Youth who do not make good school grades are also at increased risk of reporting alcohol use (Vaughan et al., 2011). Unfortunately, students in predominately Hispanic schools receive significantly fewer substance use prevention programs than students in predominately white schools and in higher social economic status schools (Kumar, O’Malley, Johnston, & Laetz, 2013). With few prevention initiatives implemented in mainly Hispanic school settings, it is not surprising that evidence from the YRBSS indicated that the prevalence of having drunk alcohol on school property was higher among Hispanic students (7.3%) than white students (4.0%) and black students (5.1%) (CDC, 2011).

**Protective Factors for Alcohol Use among Youth**

Protective factors for alcohol use among general youth populations have been identified. Building youth’s self-esteem through increasing their communication skills and decision-making skills aids in lowering substance use (Stephens et al., 2009). Interpersonal protective factors include having positive peer connections, having friends who disapprove of substance use, and having friends who do not engage in risky behaviors such as using alcohol or other drugs (Belendiuk et al., 2010; Search Institute, 2004). Family protective components against alcohol use for general youth populations also include having high family connectedness and high parental support (Bossarte & Swahn, 2008). Likewise, family closeness has been identified as having a protective influence for Hispanic youth against alcohol use (King & Vidourek, 2010;
Sale et al., 2005). Prevention efforts that aim to increase youth adoption of positive parental values, increase clearer and consistent rule setting among parents, and promote higher parental monitoring may also decrease underage substance use (Latendresse et al., 2008; Spoth, Randall, Trudeau, Shin, & Redmond, 2008). Altogether, a positive family relationship helps to facilitate higher academic performance and support, and reduces peer norms of drinking (Yan, Beck, Howard, Shattuck, & Kerr, 2008).

**School-Related Protective Factors for Alcohol Use among Youth**

Schools have been emphasized as a useful setting to implement key health education initiatives, including substance abuse prevention efforts and substance use policies (Evans-Whipp et al., 2004). Shielding school-related factors such as having high school connectedness and high positive attitudes toward school are correlated with decreased alcohol use among youth (King & Vidourek, 2010; Vaughan et al., 2011). Students who are involved in organized school activities are also at reduced risk for alcohol use (Hansen, Larson, & Dworkin, 2003). Furthermore, improving teacher-student relationships and promoting positive school morale has been associated with reduced drug use (Fletcher et al., 2008; Thompson et al., 2006). Yet additional research is needed to investigate school-related influences on alcohol use among Hispanic youth.

Though Hispanic youth are at increased risk for early alcohol initiation and reporting alcohol use than non-Hispanic youth, a vacancy in the literature exists concerning risk and protective factors. Much of the present literature focuses solely on acculturation factors (Torres Stone & Meyler, 2007; Unger, Ritt-Olson, Wagner, Soto, & Baezconde-Garbanati, 2009). Unfortunately, there are very limited evidence-based substance use prevention practices targeting specifically Hispanic youth (Marsiglia, Ayers, Gance-Cleveland, Mettler, & Booth, 2012). The
Hispanic population currently represents the largest minority group nationwide and will only continue to rapidly grow (U.S. Census Bureau, 2014). Thus, a closer investigation of the relationship between alcohol use and Hispanic youth is necessary to move towards effective school-based prevention initiatives for this high-risk population. More information is clearly needed on the potential impact school-based experience factors have on Hispanic youth’s alcohol use.

**Study Purpose**

The present study was conducted to address the gaps in the literature and assist in providing prevention specialists with information that can be used when developing school-based efforts for Hispanic youth. Therefore, the primary purpose of this study is to determine if recent alcohol use and binge drinking (past 30 days) was associated with school experiences among Hispanic youth from 12 to 17 years of age. The following research questions will be examined:

1) What is the extent of recent alcohol use and binge drinking among Hispanic youth?

2) Does recent alcohol use and binge drinking differ based on:
   a. Sex? (males and females)
   b. Age category? (12 to 13 years, 14 to 15 years, and 16 to 17 years)

3) Does recent alcohol use and binge drinking by school experiences differ based on:
   a. Sex? (males and females)
   b. Age category? (12 to 13 years, 14 to 15 years, and 16 to 17 years)

4) Does having low school experiences increase the odds for recent alcohol use and binge drinking among Hispanic youth?
5) Does having low school experiences increase the odds for recent alcohol use and binge drinking among Hispanic male and female youth?

6) Does having low school experiences increase the odds for recent alcohol use and binge drinking among Hispanic youth in the three different age categories (12 to 13 years, 14 to 15 years, and 16 to 17 years)?

METHODS

Participants

Participants of this study were Hispanic youth from 12 to 17 years of age ($N=3,457$) in all 50 U.S. states and the District of Columbia. U.S. noninstitutionalized civilians were recruited to participate in the National Survey on Drug Use and Health (NSDUH) by the Research Triangle Institute (RTI) using a deeply stratified, multistage area probability design. All youth participation was voluntary and all of their responses were kept confidential. If parents did not wish to have their child participate or the child did not want to participate, then the child was excluded from the study. The university-based Institutional Review Board approved the present study.

Instrument

A secondary data analysis was conducted of the data from the 2012 NSDUH. This national survey was designed by the U.S. Federal Government to provide prevalence rates of substance use for individuals aged 12 and older. The following sections/items of the NSDUH were used in the present study: (1) Personal/family information; (2) Alcohol Use; and (3) School Experiences. The Alcohol Use subscale was comprised of two statistical imputation revised items that assessed overall alcohol use of participants. Statistical imputation was employed to
replace missing data and ambiguous data. More specifically, missing values were replaced with non-missing values, and ambiguous data were replaced when there was no definite period within the respondent’s lifetime of last alcohol use. The imputation procedures assigned a definite value for when the participant last used the drug. The first imputation revised item required youth to respond if they had used alcohol, (1) within the past 30 days, (2) more than 30 days but within the past 12 months, (3) more than 12 months ago, or (4) never used alcohol. Recent alcohol use, for the purpose of this study, was defined as having used alcohol within the past 30 days of completing the survey. Regarding binge drinking, another imputation revised item required youth to respond if they had five or more drinks on the same occasion, defined as at the same time or within a couple of hours of each other, during the past 30 days of completing the survey.

The School Experiences subscale found in the Youth Experiences section of the NSDUH consisted of six school-related questions. Youth participants were required to rate these following six items on a four-point scale: (1) “Which of the statements below best describes how you felt overall about going to school during the past 12 months? (1 = you liked going to school a lot, 2 = you kind of liked going to schools, 3 = you didn’t like going to school very much, 4 = you hated going to school);” (2) “During the past 12 months, how often did you feel that the school work you were assigned to do was meaningful and important? (1 = always, 2 = sometimes, 3 = seldom, 4 = never);” (3) “How important do you think the things you have learned in school during the past 12 months are going to be to you later in life? (1 = very important, 2 = somewhat important, 3 = somewhat unimportant, 4 = very unimportant);” (4) “How interesting do you think most of your courses at school during the past 12 months have been? (1 = very interesting, 2 = somewhat interesting, 3 = somewhat boring, 4 = very boring);”
“During the past 12 months, how often did your teachers at school let you know when you were doing a good job with your school work? (1 = always, 2 = sometimes, 3 = seldom, 4 = never),”(6) “What were your grades for the last semester or grading period you completed? (1 = An ‘A+’, ‘A’, or ‘A-minus’ average, 2 = A ‘B+’, ‘B’, or ‘B-minus’ average, 3 = A ‘C+’, ‘C’, or ‘C-minus’ average, 4 = A ‘D’ or less than a ‘D’ average, 5 = my school does not give these grades).” For the purpose of the study, having high school experiences reflected positive school experiences and reporting low school experiences reflected negative school experiences.

The Personal/family Information section required youth to respond to their ethnicity, and all youth in the present study self-identified themselves as Hispanic. The NSDUH computer-assisted interview has been shown to be valid and reliable with percent agreements of greater than 80% on most variables (Chromy et al., 2010; Fendrich, Johnson, Sudman, Wislar, & Spiehler, 1999; Gfroerer, Eyerman, & Chromy, 2002).

Procedures

The NSDUH is sponsored by the Substance Abuse and Mental Health Services Administration and U.S. Department of Health and Human Services. Computer-assisted interviews were administered to all participants in the privacy of their own home by trained RTI field interviewers (N=665). Households chosen to visit were not allowed to be substituted for any reason to ensure NSDUH data represented diverse U.S. individuals. Prior to participation, RTI field interviewers made personal visits to the selected households and asked a few general questions during the visit. RTI field interviewers may have asked one or two household residents to participate in the study by completing the computer-assisted interview on a laptop computer. Participants did not need to have prior computer skills in order to participate, and most participants answered their questions by entering the responses directly into the computer.
For some items, interviewers read the questions aloud and entered the responses into the computer for the participants. Participants could choose to complete the NSDUH in Spanish, an option where a certified bilingual interpreter administered the questionnaire that contained the same content as the English version. Prior to administering the computer-assisted interviews to youth participants, RTI field interviewers first obtained verbal consent from parents and once they received parental permission, youth were informed of the study purpose, voluntary nature of the survey, and confidentiality of responses. To ensure confidentiality, all parents were asked to leave the interview setting.

Full names were not recorded or associated with responses given and all responses were only used for statistical analyses to warrant confidentiality of all responses. At the end of the computer-assisted interview, each interview data file was identified by a code number and was electronically submitted to the RTI on the same day the interviews were conducted. Participants received a $30 cash reward for participating in the study. Approval for this study was granted by the university-based Institutional Review Board.

Data Analysis

The Statistical Package for Social Sciences Version 21 was used to analyze all data. Frequency distributions (ranges, means, and standard deviations) were performed to determine student demographics and frequency of recent alcohol use and binge drinking. Chi-square analyses were conducted to examine if recent alcohol use and binge drinking differed based on sex and age category. Additional chi-square analyses and logistic regression was used to calculate odds ratios to determine whether recent alcohol use and binge drinking based on school experiences significantly differed among males, females, 12 to 13 year olds, 14 to 15 year olds, and 16 to 17 year olds. For the present study, school experiences scores were computed into an
overall school experience score. This overall score was dichotomized into two levels (low school experiences, high school experiences) based on the median split. As aforementioned, low levels of school experiences reflected negative school experiences and high levels of school experiences reflected positive school experiences. The alpha level of significance was set at 0.05.

RESULTS

Demographics

Of the total NSDUH sample, 3,457 youth from 12 to 17 years of age self-identified themselves as Hispanic. Regarding sex, 50.1% were Hispanic males \((n = 1725)\) and 49.9% were Hispanic females \((n = 1732)\). The sample was nearly equally distributed across the trichotomized age categories with 32.2% of these youth from 12 to 13 years of age \((n = 1112)\), 34.1% from 14 to 15 years of age \((n = 1180)\), and 33.7% from 16 to 17 years of age \((n = 1165)\). A total of 13.8% of Hispanic youth participants reported that they had recently used alcohol in the past month, and 8.0% of participants reported that they had engaged in binge drinking by consuming five or more alcoholic drinks on the same occasion in the past month of taking the survey.

Hispanic Youth’s Involvement in Recent Alcohol Use and Binge Drinking by Sex and Age Category

Self-reported alcohol use rates revealed that 13.2% of Hispanic male youth participants reported recent alcohol use compared to 14.3% of Hispanic female youth participants (Table 1). No significant difference was found between Hispanic male and female youth regarding recent alcohol use in the past month of completing the survey, \(\chi^2 = .883, df = 1, p = .347\). Regarding
binge drinking, 8.1% of Hispanic male youth participants reported binge drinking in the past month compared to 8.0% of Hispanic female youth participants. Similar to the recent alcohol use findings, there was no significant difference found between Hispanic male and female youth regarding binge drinking, $\chi^2 = .010, df = 1, p = .922$.

As age category increased, recent alcohol use significantly increased. Specifically, 2.5% of participants from 12 to 13 years reported recent alcohol use, to 13.2% of participants from 14 to 15 years reported use, and 25.1% of participants from 16 to 17 years reported use. Recent alcohol use significantly differed based on age category, $\chi^2 = 244.040, df = 2, p = <.001$.

Specifically, Hispanic youth from 16 to 17 years of age were significantly more likely than the middle age group from 14 to 15 years and the youngest age group from 12 to 13 years to use alcohol in the past month, and Hispanic youth in the middle age group from 14 to 15 years were significantly more likely to use alcohol in the past month than the youngest age group from 12 to 13 years. Similar to recent alcohol use, as age category increased, binge drinking significantly increased, from 1.1% of Hispanic youth from 12 to 13 years reported binge drinking, to 6.9% of Hispanic youth from 14 to 15 years reported use, and 15.7% from 16 to 17 years reported use. There was also a significant difference based on age category regarding binge drinking, $\chi^2 = 167.942, df = 2, p = <.001$. Specifically, Hispanic youth from 16 to 17 years of age were significantly more likely to report binge drinking than the middle age group from 14 to 15 years and the youngest age group from 12 to 13 years, and Hispanic youth in the middle age group from 14 to 15 years were significantly more likely to report binge drinking than the youngest age group from 12 to 13 years.

**Recent Alcohol Use and Binge Drinking by School Experiences among Hispanic Youth**
Logistic regression was used to calculate odds ratios and determine whether recent alcohol use and binge drinking significantly differed based on school experiences among Hispanic youth. The results indicated that 18.9% of Hispanic youth with low school experiences reported recent alcohol use compared to one-tenth (10.9%) of Hispanic youth with high school experiences. Recent alcohol use significantly differed based on school experiences among Hispanic youth participants, $\chi^2 = 40.233$, $df = 1$, $p = < .001$ (Table 2). Results showed that Hispanic youth participants with low school experiences were at increased odds and were more than half times likely ($OR = .525; 95\% CI = [.429, .642]$) to report recent alcohol use than Hispanic youth participants with high school experiences. Regarding binge drinking, 11.7% of Hispanic youth with low school experiences reported binge drinking in the past month compared to 5.7% of Hispanic youth with high school experiences. Binge drinking also significantly differed based on school experiences among Hispanic youth participants, $\chi^2 = 37.339$, $df = 1$, $p = < .001$. Hispanic youth participants with low school experiences were at increased odds and were nearly half times likely ($OR = .452; 95\% CI = [.349, .586]$) to report binge drinking compared to their Hispanic youth counterparts with high school experiences.

**Recent Alcohol Use and Binge Drinking by School Experiences among Male and Female Hispanic Youth**

The results indicated that 18.1% of Hispanic males with low school experiences reported recent alcohol use compared to one-tenth (10.2%) of Hispanic males with high school experiences. Recent alcohol use significantly differed based on school experiences among Hispanic male youth participants, $\chi^2 = 20.797$, $df = 1$, $p = < .001$ (Table 3). Results showed that Hispanic male youth with low school experiences were at increased odds and were half times likely ($OR = .512; 95\% CI = [.383, .685]$) to report recent alcohol use compared to Hispanic.
male youth with high school experiences. Regarding binge drinking, 11.4% of Hispanic male youth with low school experiences reported binge drinking in the past month compared to 5.7% of Hispanic male youth with high school experiences. Binge drinking also significantly differed based on school experiences among Hispanic male youth participants, $\chi^2 = 16.482, df = 1, p = .0001$. Hispanic male youth participants with low school experiences were at increased odds and were nearly half times likely (OR = .473; 95% CI = [.327, .683]) to report binge drinking in the past month compared to Hispanic male youth with high school experiences.

Concerning Hispanic female youth, results indicated that one-fifth (19.7%) of Hispanic females with low school experiences reported recent alcohol use compared to 11.6% of Hispanic females with high school experiences. Recent alcohol use significantly differed based on school experiences among Hispanic female youth participants, $\chi^2 = 19.694, df = 1, p = .0001$ (see Table 3). Results showed that Hispanic female youth with low school experiences were at increased odds and were more than half times likely (OR = .535; 95% CI = [.405, .707]) to report recent alcohol use compared to Hispanic female youth with high school experiences. Regarding binge drinking, 12.1% of Hispanic female youth with low school experiences reported binge drinking in the past month compared to 5.6% of Hispanic female youth with high school experiences. Binge drinking also significantly differed based on school experiences among Hispanic female youth participants, $\chi^2 = 21.025, df = 1, p = .0001$. Hispanic female youth participants with low school experiences increased the odds and were nearly half times likely (OR = .432; 95% CI = [.300, .624]) to report binge drinking compared to Hispanic female youth participants with high school experiences.

**Recent Alcohol Use and Binge Drinking by School Experiences among Hispanic Youth by Age Category**
The results revealed that 2.5% of Hispanic youth from 12 to 13 years of age with low school experiences reported recent alcohol use compared to 2.9% of Hispanic youth in the same age group with high school experiences. Recent alcohol use did not significantly differ based on school experiences among Hispanic youth from 12 to 13 years of age, \( \chi^2 = 0.119, df = 1, p = .730 \). Results indicated that Hispanic youth from 12 to 13 years of age with low school experiences were 1.160 times likely (CI = [.499, 2.698]) to report recent alcohol use compared to Hispanic youth from 12 to 13 years of age with high school experiences. Regarding binge drinking, 1.6% of Hispanic youth from 12 to 13 years of age with low school experiences reported binge drinking in the past month compared to 1.0% of their same-age Hispanic youth counterparts with high school experiences. There was no significant difference found between binge drinking and school experiences among the 12 to 13 age group, \( \chi^2 = 0.659, df = 1, p = .417 \).

Hispanic youth from 12 to 13 years of age with low school experiences were more than half times likely (OR = .613; 95% CI = [.186, 2.023]) to report binge drinking than their same-age counterparts with high school experiences.

Concerning the middle age category, 18.4% of Hispanic youth from 14 to 15 years of age with low school experiences reported recent alcohol use compared to 8.5% of Hispanic youth in the same age group with high school experiences. Recent alcohol use significantly differed based on school experiences among Hispanic youth from 14 to 15 years of age, \( \chi^2 = 23.456, df = 1, p = <.001 \). Results showed that Hispanic youth from 14 to 15 years of age with low school experiences were less than half times likely (OR = .411; 95% CI = [.284, .594]) to report recent alcohol use compared to Hispanic youth from 14 to 15 years of age with high school experiences. Regarding binge drinking, 10.3% of Hispanic youth from 14 to 15 years of age with low school experiences reported binge drinking in the past month compared to 4.0% of their
same-age Hispanic youth counterparts with high school experiences. Binge drinking also significantly differed based on school experiences among the 14 to 15 age group, $\chi^2 = 16.697, df = 1, \ p = <.001$. Hispanic youth from 14 to 15 years of age with low school experiences were less than half times likely (OR = .361; 95% CI = [.217, .599]) to report binge drinking than their same-age counterparts with high school experiences.

Results of the oldest age category from 16 to 17 years of age indicated that 28.8% of Hispanic youth in this age group with low school experiences reported recent alcohol use compared to 22.4% of Hispanic youth in the same age group with high school experiences. Recent alcohol use significantly differed based on school experiences among Hispanic youth from 16 to 17 years of age, $\chi^2 = 5.888, df = 1, \ p = .015$. Results showed that Hispanic youth from 16 to 17 years of age with low school experiences were more than half times likely (OR = .715; 95% CI = [.544, .938]) to report recent alcohol use compared to Hispanic youth from 16 to 17 years of age with high school experiences. Regarding binge drinking, 19.1% of Hispanic youth from 16 to 17 years of age with low school experiences reported binge drinking in the past month compared to 12.8% of their same-age Hispanic youth counterparts with high school experiences. Binge drinking also significantly differed based on school experiences among the oldest age category, $\chi^2 = 8.225, df = 1, \ p = .004$. Hispanic youth from 16 to 17 years of age with low school experiences were more than half times likely (OR = .620; 95% CI = [.447, .861]) to report binge drinking than their same-age counterparts with high school experiences.

**DISCUSSION**

The present study found that Hispanic youth reported recent alcohol use and binge drinking rates similar to those of other national samples (SAMHSA, 2012). A total of 13.8% of
Hispanic youth reported recent alcohol use and 8.0% of these participants reported binge drinking in the past month of taking the survey. Consequently, limited prevention efforts have been implemented and evaluated for Hispanic youth (Johnston et al., 2012; Prado & Pantin, 2011). The fact that a sizeable percentage of Hispanic youth reported recent alcohol use and binge drinking suggests that alcohol prevention initiatives are necessary to reduce the short-term and long-term consequences associated with underage drinking, such as alcohol use disorders (Windle & Zucker, 2010).

**Recent Alcohol Use and Binge Drinking among Hispanic Youth based on Sex**

Interestingly, no significant difference was found between Hispanic male and female youth regarding recent alcohol use and binge drinking rates. In detail, 14.3% of Hispanic female youth reported recent alcohol use compared to 13.2% of Hispanic male youth, and 8.0% of Hispanic female youth and 8.1% of Hispanic male youth reported binge drinking in the past month of taking the survey. This is surprising since many Hispanic individuals may find it more culturally appropriate for Hispanic males to use alcohol compared to Hispanic females, with respect to gender socialization (Raffaelli & Ontai, 2004). For example, the traditional Hispanic culture promotes Hispanic males to express *machismo* or masculinity by consuming alcohol while females are expected to refrain from consuming alcohol (Torres Stone & Meyler, 2007). Such information requires additional studies to further explore why the gender gap related to drinking for Hispanic youth may be reducing overtime.

**Recent Alcohol Use and Binge Drinking among Hispanic Youth based on Age Category**

Regarding age categories, the current study found that rates of recent alcohol use significantly increased as age increased, from 12 to 13 years (2.5%) to 14 to 15 years (13.2%) and to 16 to 17 years (25.1%). Similarly, rates of binge drinking significantly increased as age
increased from 12 to 13 years (1.1%) to 14 to 15 years (6.9%) and to 16 to 17 years (15.7%). These alcohol use findings are consistent with the professional literature, which indicates that older youth are more likely than younger youth to engage in recent alcohol use and binge drinking (e.g. Johnston et al., 2012). Although low rates of alcohol use was reported by the 12 to 13 year age group, previous research has indicated that early initiation is especially high among Hispanic youth (Johnston et al., 2012), and early alcohol usage is linked to higher levels of alcohol use throughout the late adolescent and adult years (Wilson, Battistich, Syme, & Boyce, 2002). Consequently, early alcohol initiation has also been associated with subsequent deleterious effects to adolescent brain development (White & Swartzwelder, 2005). The fact that a sizeable percentage of both Hispanic youth, especially from 14 to 17 years of age, reported recent alcohol use and binge drinking suggests that these higher rates of alcohol consumption among older adolescent age groups continue to remain a significant public health concern. Thus, it is essential to communicate effective prevention messages early to this high-risk population, and to continue reinforcing prevention message during their late adolescent years.

**Recent Alcohol Use and Binge Drinking based on School Experiences among Hispanic Youth**

The present study identified that Hispanic youth who reported having negative (low) school experiences, such as those who do not like going to school and do not make good grades, was significantly associated with overall increased involvement in both recent alcohol use and binge drinking. Similarly, a research study conducted by Vaughan and colleagues (2011) among a nationwide Hispanic youth sample revealed that failing grades also increased the risk for youth using alcohol. Previous literature has identified that students who make good grades are significantly less likely to drink alcohol compared to those who have lower grades (Centers for
Disease Control and Prevention, 2009). The present study supported the abovementioned findings, as Hispanic youth who reported having positive (high) school experiences were at decreased odds for reporting both recent alcohol use and binge drinking compared to their youth counterparts who reported having negative (low) school experiences. The present study’s results suggest that promoting high academic achievement among Hispanic youth may increase their overall school experiences, in hopes of lowering their likelihood of engaging in underage alcohol use.

**Recent Alcohol Use and Binge Drinking by School Experiences among Hispanic Male and Female Youth**

The potential impact school experiences may have on Hispanic males and Hispanic females should be highlighted. Significant differences were found between males with positive (high) school experiences and males with negative (low) school experiences regarding alcohol use, and also significant differences were found between females with positive (high) school experiences and females with negative (low) school experiences regarding alcohol use. These particular results identify that having low school experience scores, such as rating school as very unimportant, significantly increased the odds for reporting recent alcohol use and binge drinking for both sexes. More specifically, Hispanic male youth who reported having negative school experiences were at increased risk for reporting recent alcohol use and binge drinking compared to Hispanic male youth who reported having positive school experiences. Concerning Hispanic females, those who reported having negative school experiences were at increased risk for reporting recent alcohol use and binge drinking compared to their female counterparts who reported having positive school experiences. Increasing the overall importance of school and school connections are key concepts in substance use prevention targeting general youth.
populations (Maddox & Prinz, 2003; McNeely, Nonnemaker, & Blum, 2002). The current study yielded findings that underscore the need of promoting school connections to prevent alcohol use among Hispanic male and female youth.

**Recent Alcohol Use and Binge Drinking by School Experiences among Hispanic Youth based on Age Category**

A significant difference was found on involvement in alcohol use based on school experiences between Hispanic youth in the middle age group (14 to 15 years of age) and the oldest age group (16 to 17 years of age). Hispanic youth from 14 to 15 years of age and 16 to 17 years of age who reported having negative school experiences, such as seldom or never receiving positive appraisal about school work from their teachers, were placed at significantly increased risk for reporting recent alcohol use and binge drinking. Therefore, Hispanic youth in the middle and older age group who reported having positive school experiences was at reduced odds of reporting alcohol use. Preceding studies have reinforced the present study’s findings by indicating that having positive school-related experiences, including having positive feelings towards school and having positive relations with teachers and peers, have protective influences against alcohol use (Thompson et al., 2006; Youngblade et al., 2007). Students who feel more supported by school staff personnel, who dedicate their time and attention, increases these youth’s overall school connectedness (Stipek, 2004). Thus, ensuring that every student has a teacher or an advisor assigned to support him or her helps to increase positive school experiences (Blum, 2005). Fostering a positive school environment promotes opportunities for adolescents to build relationships with their teachers and to participate in school activities, and have been deemed fundamental to successful transitions into adulthood (Wilson, 2004).
Conversely, there were no significant difference found between recent alcohol use and binge drinking based on school experiences among Hispanic youth from 12 to 13 years of age. This may be contributed to the fact that Hispanic youth reported overall low rates of recent alcohol use and binge drinking. Even though this finding was not statistically significant, it is important to note that Hispanic youth in this youngest age group who reported having negative school experiences were at increased risk and were more than one times likely to report recent alcohol use compared to their same-age counterparts who reported having positive school experiences. Additionally, Hispanic youth from 12 to 13 years of age who reported having negative school experiences were at elevated risk and were more than half times likely to report binge drinking compared to Hispanic youth from 12 to 13 years of age who reported having positive school experiences. Such results should be carefully considered when developing early substance use prevention efforts. Also, Hansen and colleagues (2013) found that younger adolescents participating in organized school activities increased their prosocial attitudes and discouraged negative group dynamics that may influence encouragement of alcohol use. Preventive school-based interventions should begin at younger ages.

Limitations

The following limitations for this study should be noted. Given the self-report nature of the NSDUH survey, some students may have responded in a socially desirable manner. Because this study is cross-sectional in nature, causal relationships could not be determined. Additionally, study participants were delimited to Hispanic youth from 12 to 17 years of age. Thus, caution should be used when generalizing study findings to other age ranges and other race/ethnicities.

Conclusions

This study provides valuable insight and can be used to address some of the existing
vacancies and assist health educators in more thoroughly understanding how school experiences affect recent alcohol use and binge drinking among Hispanic youth. Reporting positive school experiences such as finding school work meaningful and important, increased interest in courses at school, receiving positive appraisal from teachers, and making good grades, may aid in preventing Hispanic youth from engaging in underage drinking. Increasing school connectedness should be extensively encouraged.

Because the traditional Hispanic culture promotes strong family management and family closeness (Sale et al., 2005) and family factors may protect Hispanic youth against alcohol use (King & Vidourek, 2010), future research should study the possible impact incorporating families in school-based prevention and education programs may have on reducing alcohol use. Future studies should seek to identify if examining alcohol use by school experiences differs based on Hispanic youth’s country of origin. This may help prevention specialists create and implement effective, culturally-tailored substance use prevention programs in the schools. Finally, implementing interventions to enhance positive school experiences may be helpful to all students.
References


Centers for Disease Control and Prevention ([CDC], 2011). Youth risk behavior surveillance system: Selected 2011 national health risk behaviors and health outcomes by race/ethnicity. *Centers for Disease Control and Prevention.*


Substance Abuse and Mental Health Services Administration ([SAMHSA], 2012). Results from 2012 National Survey on Drug Use and Health: Summary of national findings. *U.S. Department of Health and Human Services.*


Table 1. Involvement in Recent Alcohol Use and Binge Drinking among Hispanic Youth by Sex and Age Category

<table>
<thead>
<tr>
<th>Item</th>
<th>Recent Alcohol Use</th>
<th>Binge Drinking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Did Not Use in Past Month  n (%)</td>
<td>Used in Past Month  n (%)</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>1484 (85.7)</td>
<td>248 (14.3)</td>
</tr>
<tr>
<td>Male</td>
<td>1497 (86.8)</td>
<td>228 (13.2)</td>
</tr>
<tr>
<td>Age Category</td>
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<td></td>
</tr>
<tr>
<td>12 to 13 years</td>
<td>1084 (97.5)</td>
<td>28 (2.5)</td>
</tr>
<tr>
<td>14 to 15 years</td>
<td>1024 (86.8)</td>
<td>156 (13.2)</td>
</tr>
<tr>
<td>16 to 17 years</td>
<td>873 (74.9)</td>
<td>292 (25.1)</td>
</tr>
</tbody>
</table>

Notes:
N = 3,457; All categories do not total 3,457 due to missing data; Percents refer to valid percents; Missing values excluded
Table 2. Odds Ratios for Recent Alcohol Use and Binge Drinking based on School Experiences among Hispanic Youth

<table>
<thead>
<tr>
<th>Item</th>
<th>Recent Alcohol Use</th>
<th>Binge Drinking</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Did Not Use in Past Month n (%)</td>
<td>Used in Past Month n (%)</td>
</tr>
<tr>
<td>School Experiences</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low*</td>
<td>1,160 (81.1)</td>
<td>270 (18.9)</td>
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<tr>
<td>High</td>
<td>1,538 (89.1)</td>
<td>188 (10.9)</td>
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</table>

Notes:
* Indicates Referent; N = 3,457; All categories do not total 3,457 due to missing data; Percents refer to valid percents; Missing values excluded
Table 3. Odds Ratios for Recent Alcohol Use and Binge Drinking based on School Experiences among Male and Female Hispanic Youth

<table>
<thead>
<tr>
<th>Item</th>
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<th>Females</th>
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<td>Recent Alcohol Use</td>
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<tr>
<td></td>
<td></td>
<td>Did Not Use in Past Month n (%)</td>
<td>Used in Past Month n (%)</td>
<td>OR (95% CI)</td>
<td>p</td>
<td>Did Not Use in Past Month n (%)</td>
</tr>
<tr>
<td>School Experiences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low*</td>
<td></td>
<td>596 (81.9)</td>
<td>132 (18.1)</td>
<td>1.0</td>
<td></td>
<td>564 (80.3)</td>
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<tr>
<td>High</td>
<td>767 (89.8)</td>
<td>87 (10.2)</td>
<td></td>
<td>.512</td>
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<td>771 (88.4)</td>
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<td></td>
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<tr>
<td>Binge Drinking</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Did Not Binge Use in Past Month n (%)</td>
<td>Binge Used in Past Month n (%)</td>
<td>OR (95% CI)</td>
<td>p</td>
<td>Did Not Binge Use in Past Month n (%)</td>
</tr>
<tr>
<td>School Experiences</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low*</td>
<td></td>
<td>645 (88.6)</td>
<td>83 (11.4)</td>
<td>1.0</td>
<td>.327</td>
<td>617 (87.9)</td>
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<tr>
<td>High</td>
<td>805 (94.3)</td>
<td>49 (5.7)</td>
<td></td>
<td>.473</td>
<td>&lt;.001</td>
<td>823 (94.4)</td>
</tr>
</tbody>
</table>

Notes: * Indicates Referent; N = 3,457; All categories do not total 3,457 due to missing data; Percents refer to valid percents; Missing values excluded.
Table 4. Odds Ratios for Recent Alcohol Use and Binge Drinking based on School Experiences among Hispanic Youth by Age Category

### Recent Alcohol Use

<table>
<thead>
<tr>
<th>Item</th>
<th>12-13 Years</th>
<th>14-15 Years</th>
<th>16-17 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Did Not Use in Past Month n (%)</td>
<td>Used in Past Month n (%)</td>
<td>OR (95% CI)</td>
</tr>
<tr>
<td>School Experiences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low*</td>
<td>312 (97.5)</td>
<td>8 (2.5)</td>
<td>1.0</td>
</tr>
<tr>
<td>High</td>
<td>605 (97.1)</td>
<td>18 (2.9)</td>
<td>1.160 (0.499, 2.698)</td>
</tr>
</tbody>
</table>

### Binge Drinking

<table>
<thead>
<tr>
<th>Item</th>
<th>12-13 Years</th>
<th>14-15 Years</th>
<th>16-17 Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Did Not Binge Use in Past Month n (%)</td>
<td>Binge Used in Past Month n (%)</td>
<td>OR (95% CI)</td>
</tr>
<tr>
<td>School Experiences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low*</td>
<td>315 (98.4)</td>
<td>5 (1.6)</td>
<td>1.0</td>
</tr>
<tr>
<td>High</td>
<td>617 (99.0)</td>
<td>6 (1.0)</td>
<td>0.613 (0.186, 2.023)</td>
</tr>
</tbody>
</table>

Notes:
* Indicates Referent; N = 3,457; All categories do not total 3,457 due to missing data; Percents refer to valid percents; Missing values excluded