

## ATTITUDINAL AND SOCIAL CORRELATES TO RECENT ALCOHOL USE AMONG YOUTH

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*Abstract: The present study examined recent alcohol use (past 30 days) among 7th - 12th grade students (N = 54,366) in 133 schools. Results indicated that the majority of students felt alcohol use was harmful and difficult to access. Univariate and multivariate logistic regression analyses revealed that students at highest risk for recent alcohol use were those who perceived alcohol use to be fairly easy/very easy to access, felt use was not harmful/somewhat harmful, and had parents and peers who disapproved of tobacco, alcohol, and marijuana use. These findings should be considered when developing programs to prevent underage drinking.*

### INTRODUCTION

Recent alcohol use among youth remains a significant health problem in the US (Centers for Disease Control and Prevention [CDC], 2008). Nearly half of high school students (44.7%) report using alcohol in the past 30 days, with students in higher grade levels reporting the most frequent use. Recent alcohol use is higher among Hispanic (47.6%) and White youth (47.3%) than African-American youth (34.5%). In addition, one in four (26.0%) students report that they have engaged in recent episodic heavy drinking, defined as five or more drinks in a row.

Concerning perceived harm of alcohol use, trends indicate the majority of students do not perceive alcohol consumption as harmful (Johnston, O'Malley, Bachman, & Schulenberg, 2008). According to the 2007 Monitoring the Future Study, 14.9% of 8th graders, 11.6% of 10th graders, and 8.3% of 12th graders perceived trying one or two drinks of alcohol as harmful. Research indicates that perceived harm of alcohol use has a direct effect on intention to use alcohol (Stephens et al., 2009). Youth with greater perceived harm report fewer intentions to use alcohol than do their peers.

Similar to perceived harm, as grade level increases student disapproval of alcohol use decreases. Most 8th graders (54.0%) disapprove of others consuming one or two drinks of alcohol use compared to one-third of 10th (39.5%) and 12th graders (31.0%) (Johnston, O'Malley, Bachman, & Schulenberg, 2008). Students in 8th and 10th grades are more

likely than 12th grade students to disapprove of others consuming alcohol in any form (Johnston, O'Malley, Bachman, & Schulenberg, 2008).

Perceived access to alcohol is positively correlated with recent alcohol use (Lippman-Kreda, Paschall, & Grube, 2009). Research has found that formal and informal access to alcohol increases alcohol use and alcohol-related problems among youth (Foley, Altman, Duran & Wolfson, 2004; Treno, Grube, & Martin, 2003). Youth who access alcohol through direct purchase or through social groups such as family and friends tend to drink more frequently than their counterparts (Treno, Lee, Freisthler, Remer, & Gruenewald, 2005; Treno, Gruenewald, Lee, & Remer, 2007). Ease of access is correlated with being African American, being older, and having a parent who uses alcohol (Treno, Ponicki, Remer, & Gruenewald, 2008).

Underage alcohol consumption is associated with several family and peer factors. At the family level, risk factors include parental approval of youth alcohol use, poor parental monitoring, and parental drinking which may increase alcohol use as a normative behavior (Barnes, Reifman, Farrell, & Dintcheff, 2000; Beck, Boyle, & Boekeloo, 2003; King, Vidourek, & Wagner, 2004; Wickrama, Conger, Wallace, & Elder, 1999). Conversely, family protective factors include strong family connectedness, high levels of parental involvement, supportive parent-child relationships, and clear rules against alcohol use and consistent enforcement of such rules (National Institute on Drug Abuse

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[NIDA], 2005; Resnick et al., 1997; Search Institute, 2004). At the peer level, youth tend to associate with friends who have similar attitudes toward alcohol, adopt friends' beliefs and behaviors toward use (Ennett & Bauman, 1994), and drink alcohol if their friends also use (Duncan, Tildesley, Duncan, & Hops, 1995; Marcoux & Shope, 1997). Perceiving peers as likely to drink alcohol and having a close friend who has tried alcohol tends to predict future consumption of alcohol among students (Jackson, 1997). Peer-based protective factors for youth include positive peer relationships and a lack of peer approval to use alcohol (Center for Substance Abuse Prevention [CSAP], 2001; Scales & Leffert, 1999; Search Institute, 2004).

The purpose of the present study was to investigate the relationships between recent alcohol use among youth and perceived harm of use, perceived ease of access and perceived parent/peer disapproval of use. More specifically, the following research questions were examined: (1) What percent of youth perceive alcohol use to be harmful, easy to access and disapproved of by parents and peers? (2) Do perceived harm, ease of access and parental/peer disapproval of alcohol use differ based on sex and race? (3) Does recent involvement in alcohol use (past 30 days) differ significantly based on: a) Perceived harm of alcohol use? b) Perceived ease in accessing alcohol? c) Perceived parent and peer disapproval of alcohol, tobacco and marijuana use?

## METHODS

### PARTICIPANTS

Participants in this study comprised 54,366 seventh through twelfth grade students within the Greater Cincinnati area. All Greater Cincinnati middle schools and high schools were invited by the Coalition for a Drug-Free Greater Cincinnati to participate in the survey. Schools were recruited via phone calls, email messages, and website announcements. A total of 133 public and private schools in 8 counties agreed to participate. Once schools agreed, administrators were mailed survey distribution instructions, frequently asked questions and the surveys. All school and student participation was voluntary. If parents did not wish to have their child participate, then the child was excluded from the survey. Responses from students were kept anonymous and confidential. All participating schools distributed the survey to their students during the fall/winter of the 2007-2008 academic year.

### INSTRUMENT

The Pride Questionnaire for Grades 6-12 sponsored by the Coalition for a Drug-Free Greater

Cincinnati was used to survey students. For the purpose of this paper, the following survey sections were utilized: 1) Personal and family information (demographic information); 2) Perceived harm of substance use; 3) Perceived ease of accessing substances; 4) Perceived parent/peer disapproval of use; and 5) Frequency of alcohol use. Stability reliability of the PRIDE survey was established by distributing the survey on two separate occasions to a sample of students ( $N = 631$ ) one week apart. Pearson correlations were computed and resulted in coefficients ranging from .814-.851 (Metze, 2000). Adams (1994) compared PRIDE survey results to those of National Institutes of Drug Abuse (NIDA) MTF study and found alcohol use rates to be similar with PRIDE estimates being generally more conservative than NIDA estimates. Craig and Emshoff (1987) also conducted a study regarding the psychometrics of the PRIDE survey and found the survey to be valid and reliable.

### PROCEDURES

Survey administrators at participating schools were instructed to distribute the surveys to students in their classroom. Once all students received the survey, survey administrators informed students regarding the purpose of the survey, the confidential and voluntary nature of the survey, and the importance of offering honest answers. Students were instructed to place their completed questionnaires in a designated envelope/folder. Survey administrators subsequently gave the envelope/folder of completed surveys to the office staff to be sent out for data entry and analysis.

### DATA ANALYSIS

All data was analyzed using the SPSS statistical software package. Frequency distributions, means, standard deviations and ranges were used to describe students' overall perceptions regarding alcohol use. A series of odds ratios and chi-square analyses were performed to determine whether recent alcohol use differed significantly based on perceived harm, ease of access and parental/peer disapproval of alcohol use. The alpha level of significance was set at .05.

## RESULTS

A total of 54,366 students out of 70,204 students in grades 7 through 12 in participating schools completed surveys (77.4% response rate). Half of students were male (49.4%) and half were female (50.6%). Grades were equally represented within the sample ranging from 14.7% to 18.2% across grade levels. Seventy-five percent of students were White, 14.4% African American, 2.4% Asian/Pacific Islander, 1.8% Hispanic/Latino and 6.3% self-reported as "other." Greater than half (58.7%)

lived with their mother and father, while 16.4% lived with their mother only, 10.8% lived with their mother and stepfather, 4.2% lived with their father only, 3.5% lived with their father and stepmother and 6.3% lived with "other." Two-thirds (66.2%) did not currently have a part-time or full-time job.

#### INVOLVEMENT IN RECENT ALCOHOL USE

Of all students, 15.8% reported drinking beer in the past month, 13.2% drank wine coolers and 15.3% drank liquor. A total of 20.1% reported using any type of alcohol in the past month. Males (20.8%,  $n = 4,932$ ) were significantly more likely than females (18.5%,  $n = 4,515$ ),  $\chi^2 = 42.383$ ,  $df = 1$ ,  $p < .001$ , and Hispanic students (24.2%,  $n = 224$ ) were significantly more likely than White (21.2%,  $n = 8201$ ), African American (13.2%,  $n = 959$ ) and students of other races (19.9%,  $n = 886$ ) to report using alcohol in the past month,  $\chi^2 = 225.842$ ,  $df = 3$ ,  $p < .001$ . The average age of alcohol initiation was 13.46 ( $SD = 1.923$ ). As grade level increased, so did the percentage of recent alcohol use among youth.

#### PERCEIVED HARM OF ALCOHOL USE

Most (70.6%) students felt it was harmful/very harmful to their health to drink any type of alcohol. Regarding specific alcoholic beverages, most felt it was harmful/very harmful to drink beer (55.7%) and liquor (65.3%), while half (49.6%) felt it was harmful/very harmful to drink coolers, breezers, hard lemonade, etc. Females (73.7%,  $n = 17,731$ ) were significantly more likely than males (67.5%,  $n = 15,686$ ) to perceive alcohol use as harmful/very harmful to their health,  $\chi^2 = 205.646$ ,  $p < .001$ . Females were significantly more likely to perceive beer use as harmful/very harmful (60.3%,  $n = 14,531$  VS 50.8%,  $n = 11,791$ ,  $\chi^2 = 437.381$ ,  $p < .001$ ), wine cooler use as harmful/very harmful (52.9%,  $n = 12,738$  VS 46.3%,  $n = 10,725$ ,  $\chi^2 = 208.100$ ,  $p < .001$ ), and liquor use as harmful/very harmful (68.8%,  $n = 16,540$ , 62.4%,  $n = 14,461$ ,  $\chi^2 = 213.716$ ,  $p < .001$ ). African American students (74.7%) were significantly more likely than White (69.9%) and Hispanic students (68.3%) to perceive alcohol use as harmful/very harmful to their health,  $\chi^2 = 66.882$ ,  $p < .001$ . African American students (63.8%) were significantly more likely than White (53.9%) and Hispanic students (53.0%) to perceive

Table 1. Perceived Harm, Ease of Access, and Parent/Peer Disapproval of Substance Use

How harmful do you feel it is to . . .	Harmful/ Very Harmful <i>n</i> (%)	Not Harmful/ Somewhat Harmful <i>n</i> (%)
Drink beer	28758 (55.7)	22840 (44.3)
Drink coolers, breezers, hard lemonade, etc.	25545 (49.6)	26008 (50.4)
Drink liquor	33636 (65.3)	17877 (34.7)
Drink any type of alcohol	36420 (70.6)	15131 (29.4)
How easy is it to get . . .	Fairly Easy/ Very Easy <i>n</i> (%)	Fairly Difficult/Very Difficult/Inaccessible <i>n</i> (%)
Beer, wine, liquor, and other alcohol products	23704 (47.0)	26742 (53.0)
Cigarettes, smokeless tobacco, cigars, etc.	19487 (38.7)	30854 (61.3)
Marijuana	16097 (31.9)	34311 (68.1)
Other illicit drugs	9288 (18.5)	41040 (81.5)
How wrong would . . .	Wrong/ Very Wrong <i>n</i> (%)	Not Wrong at All/ A Little Wrong <i>n</i> (%)
Your parents feel it is for you to use alcohol?	40943 (91.8)	9578 (19.0)
Your parents feel it is for you to use tobacco?	41657 (83.3)	8334 (16.7)
Your parents feel it is for you to use marijuana?	46411 (91.8)	4157 (8.2)
Your friends feel it is for you to use alcohol?	25171 (50.6)	24581 (49.4)
Your friends feel it is for you to use tobacco?	33013 (66.1)	16963 (33.9)
Your friends feel it is for you to use marijuana?	33524 (67.4)	16195 (32.6)

N = 54,366; Missing values excluded; Percents refer to valid percents

Table 3. Odds Ratios for Recent Alcohol Use and Perceived Ease in Accessing Substances

Perceived Ease of Access	Did not use in Past Month <i>n</i> (%)	Used in Past Month <i>n</i> (%)	$\chi^2$	Univariate OR (95% CI)	Multivariate OR (95% CI)
Any alcohol (fairly easy/very easy)	15,051 (63.8)	8,558 (36.2)	7236.881	9.557 (9.010, 10.138)*	3.631 (3.371, 3.912)*
Any tobacco (fairly easy/very easy)	12,929 (61.6)	8,048 (38.4)	7513.650	8.491 (8.049, 8.959)*	2.326 (2.161, 2.503)*
Marijuana (fairly easy/very easy)	8,707 (56.5)	6,695 (43.5)	7583.336	7.228 (6.889, 7.583)*	2.699 (2.525, 2.885)*
Other illicit drugs (fairly easy/very easy)	4,891 (57.2)	3,659 (42.8)	3314.311	4.119 (3.916, 4.333)*	1.201 (1.126, 1.282)*

Note: Odds ratios for recent alcohol use comparing students who perceived substances as fairly easy/very easy to access versus students who perceived substances as fairly difficult/very difficult to access.

\*  $p < .001$

to report that their friends felt it was wrong/very wrong for them to use tobacco,  $\chi^2 = 12.995$ ,  $p < .001$ . African American students (55.4%) were significantly more likely than Hispanic (47.7%) and White students (49.3%) to report that their friends feel it is wrong/very wrong for them to use alcohol,  $\chi^2 = 101.443$ ,  $p < .001$ . White students (69.5%) were significantly more likely than African American (58.5%) and Hispanic students (60.5%) to report that their friends felt it was wrong/very wrong for them to use marijuana,  $\chi^2 = 373.912$ ,  $p < .001$ .

#### RECENT ALCOHOL USE, PERCEIVED HARM OF USE, EASE OF ACCESS AND PARENTAL/PEER DISAPPROVAL

Univariate logistic regression analyses indicated that students who felt any type of alcohol use was harmful/very harmful were at significantly lower odds for recent alcohol use than students who felt any type of alcohol use was not harmful/somewhat harmful (Table 2). This significant difference was similarly found for perceived harm in drinking beer, wine coolers and liquor, as well as in using tobacco, marijuana and other illicit drugs. Thus, perceived harm was inversely related to recent alcohol use. A multivariate logistic regression analysis was performed with recent alcohol use as the dependent variable and seven predictor variables: perceived harm of any alcohol, beer, wine coolers, liquor, tobacco, marijuana and other illicit drugs. A total of 49,792 cases were analyzed and the full model significantly predicted recent alcohol use involvement (omnibus chi-square = 6956.17,  $df = 7$ ,  $p < .001$ ), accounting for between 13.0% and 20.5% of the variance in recent alcohol use.

Univariate logistic regression analyses also revealed that students who perceived alcohol as easy/very easy to access were significantly more likely

than students who perceived alcohol as difficult/very difficult/inaccessible to report recent alcohol use (Table 3). Similar results were found for tobacco, marijuana, and other illicit drugs as students who perceived those substances as easy/very easy to access had significantly higher odds for recent alcohol use than their counterparts. Multivariate logistic regression was conducted with recent alcohol use as the dependent variable and perceived ease of access to alcohol, tobacco, marijuana and other illicit drugs as the predictor variables. A total of 39,459 cases were analyzed and the full model significantly predicted recent alcohol use involvement (omnibus chi-square = 10,250.00,  $df = 4$ ,  $p < .001$ ), accounting for between 18.8% and 29.6% of the variance in recent alcohol use.

Univariate and multivariate logistic regression analyses were also used to examine the relationship between recent alcohol use and parent/peer disapproval of substance use. Univariate logistic regression findings indicated that students with parents who felt it was wrong/very wrong to use tobacco, alcohol, marijuana or other illicit drugs were at significantly lower odds for recent alcohol use than students with parents who felt it was a little wrong/not wrong at all to use these substances (Table 4). A multivariate logistic regression analysis was performed with recent alcohol use as the dependent variable and perceived parent disapproval of alcohol use, tobacco use, marijuana use and other illicit drug use as the predictor variables ( $N = 49,385$  cases analyzed). Results indicated that the model significantly predicted recent alcohol use involvement (omnibus chi-square = 4,660.22,  $df = 4$ ,  $p < .001$ ), accounting for between 9.0% and 14.3% of the variance in recent alcohol use.

Similarly, having friends who disapproved of alcohol, tobacco, marijuana and other illicit drug

use was associated with decreased odds for recent alcohol use (Table 4). The multivariate logistic regression analysis (N = 48,544 cases analyzed) with recent alcohol use as the dependent variable and perceived peer disapproval of alcohol use, tobacco use, marijuana use and other illicit drug use as the predictor variables significantly predicted recent alcohol use involvement (omnibus chi-square = 10,693.28, df = 4,  $p < .001$ ). The model accounted for between 19.8% and 31.3% of the variance in recent alcohol use.

## DISCUSSION

The present study found that most youth perceived alcohol use to be harmful to their health. Youth who felt alcohol use was harmful/very harmful were significantly less likely than youth who felt alcohol use was not harmful/somewhat harmful to have consumed alcohol in the past 30 days. Previous research has similarly found a strong association between perceived risk and youth substance use (Danesco, Kingery, & Coggeshall, 1999; Morgan et al., 1999; Novak, Reardon, & Buka, 2002; Smith & Rosenthal, 1995). Regarding sex and racial differences, females were significantly more likely than males and African American students were significantly more likely than White and Hispanic

students to perceive alcohol use as harmful/very harmful to their health. Such differences may help to explain why males and Hispanic students reported the highest rates of recent alcohol use. Compared to other races/ethnicities, Hispanic youth were less likely to perceive alcohol use as harmful and more likely to use alcohol in the past 30 days. These findings should be considered when developing future prevention programs and interventions.

Alcohol norms and beliefs are formed as a result of direct experiences with alcohol as well as indirect experiences with family, peers, and other social outlets (Marshall & Chassin, 2000). Youth with parents who do not consistently set and enforce clear rules regarding substance use tend to feel that occasional alcohol use is not harmful and that weekly use does not lead to dependence or abuse (Tucker, Ellickson, & Klein, 2008). Since youth alcohol use can be strongly influenced by parental communication and expectations, parents should therefore be encouraged to deliver consistent messages regarding the harmful effects of alcohol use to their children (Henry, Slater, & Oetting 2005). Such messages may help to increase awareness of the potential harms of underage drinking and in turn decrease youth consumption. Prevention programs and educational campaigns should continue to inform youth, parents

Table 4. Odds Ratios for Recent Alcohol Use and Perceived Parent/Peer Disapproval of Substance Use

Parental Disapproval of Substance Use	Did not use in Past Month n (%)	Used in Past Month n (%)	$\chi^2$	Univariate OR (95% CI)	Multivariate OR (95% CI)
Any alcohol use (wrong/very wrong)	34,744 (85.9)	5,719 (14.1)	4567.092	.201 (.191, .211)*	.276 (.351, .293)*
Any tobacco use (wrong/very wrong)	37,380 (83.6)	7,340 (16.4)	3395.535	.194 (.183, .206)*	.382 (.351, .416)*
Marijuana use (wrong/very wrong)	38,069 (82.3)	8,175 (17.7)	2083.896	.225 (.210, .241)*	.567 (.504, .637)*
Other illicit drugs (wrong/very wrong)	38,424 (81.3)	8,849 (18.7)	910.654	.293 (.269, .319)*	.361 (.314, .414)*
<b>Peer Disapproval of Substance Use</b>					
Any alcohol use (wrong/very wrong)	23,369 (59.5)	938 (9.5)	7853.513	.072 (.067, .077)*	.180 (.165, .196)*
Any tobacco use (wrong/very wrong)	28,793 (73.2)	2,388 (24.3)	8091.329	.118 (.112, .124)*	.450 (.419, .483)*
Marijuana use (wrong/very wrong)	30,584 (77.9)	3,109 (31.7)	7769.003	.132 (.126, .139)*	.413 (.385, .444)*
Other illicit drugs (wrong/very wrong)	33,859 (86.4)	6,022 (61.7)	3154.633	.254 (.241, .267)*	.692 (.647, .739)*

Note: Odds ratios for recent alcohol use comparing students with parents/peers who felt substance use was wrong/very wrong versus students with parents/peers who felt substance use was a little wrong/not wrong at all.

\*  $p < .001$

and teachers regarding the dangerous effects of youth alcohol use and activities.

The present study also indicated that nearly half of students felt alcohol was easy to access. As grade level increased, perceived ease of access also increased. Hispanic and White students perceive alcohol as easier to obtain than other racial/ethnic groups. Youth who felt alcohol was fairly/very easy to access were significantly more likely than their counterparts to report recent use of alcohol. Others have noted that easy access to alcohol influences underage drinking consumption (Hawkins, Catalano, & Miller, 1992). Recent research has also found high rates of peer drinking to be associated with increases in perceived availability of alcohol (Kuntsche, Kuendig, & Gmel, 2008). Youth perceptions of alcohol access may be manipulated by the visibility of drinking among friends and peer groups.

Previous research indicates that increased access to alcohol from formal sources such as convenience stores and informal sources such as parents and friends is correlated with increased rates of youth alcohol use (Dent, Grube, & Biglan, 2005; Treno et al., 2003). More recent research found that youth alcohol use is more strongly associated with easy access through informal channels. Treno et al. (2008) found youth informally obtained alcohol in approximately 95% of all incidences of use. Interestingly, in the present study ease of access did not differ based on sex, however, significant differences were found based on race. African American students were significantly less likely than Hispanic and White students to perceive alcohol as fairly easy/very easy to access. This finding is consistent with previous research, which has found ease of access from informal sources and the use of social sources for alcohol access to be negatively related to being African American (Treno et al., 2008). With this in mind, prevention programs should target both informal and formal sources of access as a means to decrease access and underage consumption. Parent and community educational programs should be implemented to raise awareness of the relationship between ease of alcohol access and youth use.

The results of this study also indicated that youth who have parents or friends who do not disapprove of alcohol use tend to be at increased odds for recent alcohol use. Previous research has found that adolescent alcohol use is more closely associated with perceived approval of substance use among friends than perceived approval of use among other youth their age, family, schools and other organizations (Baer, Stacy, & Larimer, 1991; Borsari & Carey, 2001; Lewis & Neighbors, 2006; Lo, 1995; Perkins, 1985; Thombs, Ray-Tomasek, Osborn, & Olds, 2005; Thombs, Wolcott, & Farkash, 1997). Perceived approval of use by friends is a strong

predictor of adolescent alcohol use. The findings from this study corroborate those of previous studies, which suggest that perception plays a significant role in adolescent alcohol consumption and contributes to adolescents' decision-making regarding alcohol use. This study adds to the field in showing that parent/peer disapproval not only increases the odds for alcohol use overall but greatly increases the odds for recent alcohol use.

Positive peer norms regarding alcohol consumption contribute to youth underage drinking. Peer approval of alcohol use is strongly and directly related to youth consumption of alcohol (Larimer et al., 2004; Perkins & Wechsler, 1996; Thombs et al., 1997; Wood et al., 1992). Perceiving friends as approving of underage drinking behaviors tend to increase the likelihood youth actually consume alcohol (Larimer et al., 2004; Perkins & Wechsler, 1996; Thombs et al., 1997; Wood et al., 1992). Lo (1995) found a positive association between peer approval and youth use of alcohol whereas Alva (1998) found perceived peer disapproval of alcohol use to be directly related to lower levels of consumption. The present study also found that peer disapproval of alcohol use differed significantly based on sex and race. Females and African American students were those most likely to report that their friends felt it was wrong/very wrong to use alcohol. Thus, specific prevention efforts may be needed to be tailored toward males, White students and Hispanic students regarding access and alcohol availability issues. Additional research is needed to determine reasons for such differences.

Youth with peers who drink are more likely than youth with peers who do not drink to consume alcohol themselves (Jessor, 1987; Ennett & Bauman, 1994). Perceiving high rates of drinking among friends is also associated with higher rates of alcohol use (Baer et al., 1991; Borsari & Carey, 2001; Thombs et al., 1997, 2005). In fact, perceiving friends as current users of alcohol is more negatively associated with youth alcohol use than perceived alcohol use among peers. Similarly, youth with parents who drink often affiliate with peers who also use alcohol or other drugs (Fergusson, Horwood, & Lynskey, 1995).

Research indicates that perceived parental approval of alcohol use contributes to youth alcohol consumption. In a study on 6th graders, results found students were more than twice as likely to drink alcohol if they felt their parents would not be angry (Simons-Morton, 2004). Research suggests that parent disapproval of alcohol use deters youth consumption of alcohol (Ary, Tildesley, Hops, & Andrews, 1993; Ellickson & Hays, 1991; Ellickson, Tucker, Klein, & McGuigan, 2001; Monshouwer, Smit, De Zwart, Spruit, & Van Ameijden, 2003). This study provides additional evidence to the

connection between parental disapproval of alcohol use and underage drinking. Youth who reported parental disapproval of alcohol use were significantly less likely than their counterparts to consume alcohol in the past 30 days. These findings underscore the importance of parental expectations and clear disapproval of youth alcohol use.

Females in this study were more likely than males to report having parents who disapproved of substance use. This finding may help to explain the significant difference in recent use based on sex. Sale, Sambrano, Springer, & Turner (2003) similarly found parental disapproval was significantly related to less alcohol use by female youth. Additional research on sex differences and parent factors are warranted. Specifically, assessing parental differences in alcohol use disapproval for male and female youth is clearly needed. Perhaps, parents are more lenient toward male use of alcohol than female use. Further investigation into parental disapproval may yield additional insights into the role of disapproval on youth alcohol use. Nevertheless, in lieu of the strong impact that parents can have on youth alcohol use, prevention specialists should encourage parents to set clear expectations with their children regarding alcohol use and to verbally inform their children that they disapprove of underage drinking.

In the present study, Hispanic students were less likely than African American and White students to report having parents who disapproved of alcohol use. Research indicates that parent disapproval of alcohol and other drug use is associated with reduced alcohol use among youth (Ellickson & Hays, 1991; Ellickson, Tucker, Klein, & McGuigan, 2001; Monshouwer, Smit, De Zwart, Spruit, & Van Ameijden, 2003). Such findings should be used by program developers to more effectively prevent recent alcohol use among Hispanic youth. Incorporating a parent component into programs targeting this population may be an essential feature of prevention. Increasing parental awareness of the dangers of substance use and training parents in effective communication may help to reduce recent alcohol use among Hispanic youth.

Regarding family protective factors, research indicates that positive connectedness to parents reduces the influence of friends' alcohol use on underage drinking (Toumbourou & Gregg, 2002). Interestingly, family connectedness among youth has been shown to reduce the impact of peer norms associated with binge drinking (Kerr, Beck, Shattuck, Kattar, & Unburu, 2003; Yan, Beck, Howard, Shattuck, & Kerr, 2008). Therefore, strengthening family connections may be a key factor in mediating positive peer norms toward alcohol use. Open discussions between parents and youth on alcohol and other drug use as well as setting

clear rules and expectations for alcohol use should be promoted in decreasing youth alcohol use (NIDA, 1997; National Association of Social Workers [NASW], 2002). Other mediating factors for youth alcohol use include parental warmth, support and acceptance. Such parental behaviors are recognized as essential contributors to adolescent socialization by augmenting self-esteem, social and emotional development, and competence skills. Further research indicates these parenting behaviors establish a strong and positive parent-child relationship, which protects against peer influence and potentially risky environments (Brook, Brook, Gordon, Whiteman & Cohen, 1990; Mason, Cauce, Gonzales, & Hiraga, 1994). Conversely, adolescents lacking essential parent factors such as warmth, support, and acceptance are less resilient and more likely to be influenced by negative peers to drink alcohol.

Research has shown the strong association between family connectedness and adolescent substance use (Simons, Simons, & Wallace, 2004; Vakalahi, 2001). High levels of connectedness tend to reduce opportunities for substance use while encouraging positive family attitudes toward healthy behaviors (Crawford & Novak, 2002). Parental warmth, support, and acceptance which are main features of connectedness play significant roles in the development of pro-social behaviors among youth. These features enhance self-esteem, develop social skills, and instill a sense of competence in youth (Baumrind, 1991; Grusec & Goodnow, 1994; Lamborn, Mounts, Steinberg, & Dornbusch, 1991). Low levels of family connectedness are related to both frequent and excessive adolescent alcohol use (Bahr, Marcos, & Maughan, 1995; Crawford & Novak, 2002).

Identifying social influences on adolescent alcohol use is an essential piece in the development of effective prevention and intervention initiatives. The findings from this study provide additional evidence, which associates peer and parental disapproval to lower rates of youth alcohol use. Effective underage drinking prevention efforts should include a multi-disciplinary and multi-faceted approach that appropriately addresses social norms toward alcohol use. Concerted, multi-level approaches are necessary to impact youth knowledge, perceptions, skills and behaviors.

#### STUDY LIMITATIONS

Lastly, the limitations of the present study should be noted. First, participants were 7th through 12th grade students in the Greater Cincinnati area. Therefore, results may not be generalizable to students in other grades or geographical areas. Second, the monothematic design of the survey instrument may have resulted in a response-set bias

in some participants. Third, some participants may have responded in a socially desirable manner as the survey was self-reported and sensitive in nature. Fourth, data was self-reported and not based on observations, thus limitations to honest and accurate behavioral recall may exist. Finally, since data was cross-sectional, causal relationships could not be determined.

#### CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS FOR FUTURE RESEARCH

The findings from this study add to the literature by providing information on the connection between recent alcohol use and youth perceived harm, ease of access and parent/peer disapproval of use. Results of this study may assist prevention specialists and youth health professionals to develop efforts and initiatives that effectively combat the problem of recent alcohol use among youth. Consistent educational messages regarding the harm of recent alcohol use, environmental strategies to decrease alcohol access

and social norms campaigns to increase parent/peer disapproval of youth use should be encouraged.

Additional studies are needed to further investigate youth involvement in recent alcohol use and other drugs. Future studies should seek to examine the following research questions: 1) What are the underlying reasons explaining differences in perceived harm of alcohol use, ease of access and parent/peer disapproval based on sex and race? 2) Does recent involvement in alcohol use differ based on formal and informal sources of access to alcohol? 3) What impact do parent and teacher communication with youth regarding the dangers of underage drinking have on recent alcohol use among youth and perceived harm of alcohol? 4) What impact do parent and school rules/expectations regarding youth alcohol use have on recent alcohol use among youth? 5) Does recent involvement in other drugs such as marijuana, cocaine, ecstasy, and prescription drugs differ based on perceived harm, ease of access and parent/peer disapproval of substance use?

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