

**Parenting Practices and Early Adolescent Alcohol Use in
Urban, Ethnically Diverse Youth**

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Abstract

Alcohol is the most commonly used drug in adolescence. Almost half of U.S. children have used alcohol prior to the eighth grade. Parenting practices (e.g., parental monitoring, parent-child communication, parent-child relationship satisfaction) have been found to influence adolescent alcohol use. This dissertation sought to examine how these parenting practices influence alcohol behaviors and intentions throughout early adolescence in three groups: all students, sixth grade non-users of alcohol, and sixth grade users of alcohol. Participants included 5755 ethnically diverse students from the Project Northland Chicago (PNC) Intervention Trial. At baseline, the average age was 11.8 years and 69% of students received free or reduced-price lunch. A subset of analyses used 1373 students and parents contributing data from both the baseline (beginning of sixth grade) and final follow-up (end of eighth grade) surveys. Mixed effects regression and growth curve analyses were used to explore how parenting influenced early adolescent alcohol use. Results indicate that children's perceptions of parenting influence alcohol use over time, such that perceptions of increases in parenting practices (e.g., more consistent parental monitoring, more frequent parent-child communication) are related to decreases in the normative trajectory of alcohol use. Children's perceptions of alcohol-specific communication have the strongest influence on the normative trajectory of alcohol use, with this alcohol-specific communication being associated with less alcohol use. However, alcohol-specific communication was the least frequently occurring of all parenting practices. Parents' perceptions of parental

monitoring have the strongest influence on alcohol use compared with the other parenting practices, such that increased monitoring is associated with decreased alcohol use. In addition, parents' and children's perceptions of parenting practices, while significantly correlated, are quite different. General communication and alcohol-specific communication are two distinct constructs which need to be measured separately. Finally, parenting practices are not as influential once children have begun using alcohol. The results of this dissertation suggest that interventions to prevent or reduce alcohol use need to focus on children's perceptions of alcohol-specific communication as well as parents' perceptions of monitoring. In addition, interventions may need to be tailored based on the child's alcohol use status.

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Chapter 1.0 Introduction and Background

1.1 Why Focus on Early Adolescent Alcohol Use?

Alcohol is the most commonly used psychoactive drug among adolescents (Guo et al., 2000). Early-onset alcohol use is associated with multiple social, behavioral, and developmental problems during childhood and adolescence (Ellickson et al., 2003; Grant & Dawson, 1997; Greenblatt, 2000; Gruber et al., 1996; R. Hingson et al., 2002; R. Hingson et al., 2003a; R. Hingson et al., 2001; R. Hingson et al., 2003b; R. W. Hingson et al., 2000; Stueve & O'Donnell, 2005). These social, behavioral, and developmental problems can persist into later life

Alcohol use by age 12 is associated with subsequent use of alcohol in later adolescence as well as other problem behaviors including alcohol-related violence, injuries, drinking and driving, absenteeism from school or work, and increased risk for using other drugs (Gruber et al., 1996). Initiation of alcohol use by age 10 has been found to be a more potent cause of subsequent alcohol use than all other known risk factors including parental drinking, ineffective parenting, lack of school bonding, and peer alcohol initiation (Hawkins et al., 1997). Youth who drink before age 15 are estimated to be 4 times more likely to develop alcohol dependence than those who begin drinking at age 18 or older (Grant & Dawson, 1997; Substance Abuse and Mental Health Services Administration, 2004). Data from the National Longitudinal Alcohol Epidemiologic Survey indicate that the odds of alcohol dependence decrease by 14% and the odds of abuse decrease by 8% with each delayed year of onset of use (Grant & Dawson, 1997). Of those adults who began to drink before age 12, 16% report being

dependent on alcohol in the past year (Substance Abuse and Mental Health Services Administration, 2004). Clearly, an understanding of the factors that put youth at risk for early initiation of alcohol use is vital to preventing the many negative outcomes associated with alcohol use that occur during adolescence and that can persist into adulthood. However, “limited research has focused on alcohol use and predictors of use among pre- and early adolescents (p.71),” (Duncan et al., 2006).

1.2 Alcohol Use Rates Among Adolescents

1.2.1 Overall Rates

Although the rate of alcohol use has declined somewhat since 1999 (CDC & Centers for Disease Control and Prevention, 2004; L. D. Johnston et al., 2005), alcohol use among youth continues to be prevalent. In 2005, 10.8 million or 28.2% of youth aged 12-20 reported using alcohol in the last month and 7.2 million (18.8%) reported binge drinking (Substance Abuse and Mental Health Services Administration, 2006). In 2004, alcohol use initiation, defined as having first used alcohol in the past year, was reported by 4.4 million youth and adults, an increase over both 2002 and 2003 estimates (3.9 million and 4.1 million respectively) (Substance Abuse and Mental Health Services Administration, 2005b). Almost 87% (3.8 million) of the 4.4 million new alcohol initiates in 2004 were younger than the legal age of 21 years old at the time of initiation (Substance Abuse and Mental Health Services Administration, 2005b).

Alcohol use begins early, with 33.9% of ninth graders reporting drinking more than a few sips of alcohol before the age of 13 (Eaton et al., 2006) and 4.2% of 12-13

year olds currently using alcohol (Substance Abuse and Mental Health Services Administration, 2006). By the ages of 14-15, the percentage of youth that are currently using alcohol almost triples to 15.1% (Substance Abuse and Mental Health Services Administration, 2006). Among adolescents in the eighth grade, 41.0% report ever using alcohol and 19.5% have ever been drunk (L. D. Johnston et al., 2006). Alcohol use in the last month is also prevalent with 17.1% of eighth graders reporting current alcohol use and 6.0% reporting they had been drunk at least once in the past 30 days (L. D. Johnston et al., 2006). Of the eighth graders that reported alcohol use in 1995, 29.6% reported first using alcohol in sixth grade, 15.6% in seventh grade, and 9.3% in eighth grade (P. M O'Malley et al., 1999), showing the early onset of alcohol use, especially among the youngest age group. Moreover, the prevalence of alcohol use only increases as adolescents get older. By twelfth grade, 75.1% of adolescents reported they had used alcohol and 57.5% had ever been drunk (L. D. Johnston et al., 2006). In addition, alcohol use in the past 30 days was reported by 47% of twelfth graders and 30.2% reported having been drunk at least once during that time (L. D. Johnston et al., 2006).

Excessive alcohol use among adolescents is also a widespread problem. The Monitoring the Future Study (2006) found that in the two weeks prior to the survey 10.5% of eighth graders reported having five or more drinks in a row (L. D. Johnston et al., 2006). For twelfth graders, this percentage more than doubled, rising to 28.1% (L. D. Johnston et al., 2006). Among students who reported drinking alcohol in their lifetime, 4.3% of eighth graders and 22.7% of twelfth graders drank on 40 or more occasions (L. D. Johnston et al., 2006). In addition, of all twelfth graders surveyed, 8.7% drank 40 or

more times in the last year and 5.4% had been drunk 40 or more times (L. D. Johnston et al., 2006). Attitudes towards binge drinking have also been changing from 1991 to 2003 such that a smaller percentage of students consider regular or binge drinking to be a great risk and a smaller percentage disapprove of others who regularly drink alcohol or binge drink (Newes-Adeyi et al., 2005)

1.2.2 Alcohol Use Rates by Race/Ethnicity

Early alcohol use is found among all races/ethnicities, socio-economic strata, both genders, and urban-to-rural populations (Komro et al., 1997). However, alcohol use rates do vary by race/ethnicity. Alcohol use by age 13 is most common among Hispanics (29.8%), then Blacks (27.9%), then Whites (23.7%) (Eaton et al., 2006). Table 1 shows additional patterns of alcohol use among White, Black and Hispanic students (L. D. Johnston et al., 2006).

Table 1: Prevalence of Alcohol Use by Race/Ethnicity (%)					
	Lifetime Alcohol Use	Past Year Alcohol Use	Past Month Alcohol Use	Binge Drinking	Been Drunk (Past Month)
8th Grade					
Whites	41.8	35.6	17.9	10.8	6.6
Blacks	42.8	31.5	14.9	8.2	3.8
Hispanics	48.0	39.7	20.6	14.8	7.0
12th Grade					
Whites	78.9	73.5	52.3	33.0	36.5
Blacks	65.6	54.9	29.0	11.6	15.4
Hispanics	75.1	68.2	43.3	24.7	22.2

As shown in Table 1, lifetime alcohol use in the eighth grade is most common among Hispanic students while in the twelfth grade, lifetime alcohol use becomes most common

among White youth, suggesting that Hispanic youth initiate alcohol use earlier than Black or White youth, but White youth more than catch up by twelfth grade. Past year alcohol use also follows a similar pattern with Hispanic youth having the highest rates in eighth grade and White youth having the highest rates in twelfth grade. However Black youth have lower past year alcohol use rates in eighth grade than White youth, unlike lifetime alcohol use. Past month alcohol use, rates of binge drinking and been drunk also follow the same pattern as past year use in both eighth and twelfth grades.

1.2.3 Alcohol Use Rates by Gender

Lifetime alcohol use is more prevalent among males with 75.7 % of twelfth grade males compared to 74.5% of twelfth grade females reporting ever using alcohol, while in eighth grade, both females and males report the same amount of lifetime alcohol use (41.0%) (L. D. Johnston et al., 2006). Past year alcohol use is more common among eighth grade females (34.9%) than males (32.9%), however in twelfth grade more males (69.7%) than females (67.5%) report past year use (L. D. Johnston et al., 2006). Alcohol use before age 13, however, is more common among males with 29.2% of males and 22.0% of females reporting use before 13 (Eaton et al., 2006). Rates of heaving drinking among males and females show a similar pattern with more males reporting heavy drinking than females (9th Grade: 20.7% vs. 17.3%; 12th Grade: 27.5% vs. 23.5%) (Eaton et al., 2006).

1.2.4 Chicago-Specific Alcohol Use Rates

Alcohol use rates in Chicago are similar to national rates. Among 9-12th graders in Chicago, 78.6% report lifetime alcohol use, with 79.7% of females reporting lifetime use and 77.6% of males (Eaton et al., 2006). Current alcohol use is also common with 43.4% of 9-12th graders reporting alcohol use in the past month, with more females (44.0%) than males (42.9%) reporting past month use. A little over one-fifth of students (22.2%) report binge drinking, or having 5 or more drinks in a row, at least once in the last 30 days (Eaton et al., 2006). Unlike lifetime and current alcohol use, binge drinking is more common among males (23.6%) than females (21.0%) in Chicago (Eaton et al., 2006).

1.2.5 Project Northland Chicago Alcohol Use Rates

Project Northland Chicago (PNC) was an alcohol prevention intervention conducted in Chicago Public Elementary schools. The intervention began when students were in sixth grade and continued through eighth grade. Further detail about the intervention can be found in section 3.2. Alcohol use rates among the students in Project Northland Chicago can be seen in Table 2.

Table 2: Prevalence of Alcohol Use in Project Northland Chicago					
	Past Year Alcohol Use	Past Month Alcohol Use	Past Week Alcohol Use	Binge Drinking	Ever Drunk
Start of 6th Grade					
Overall	17.2	6.8	2.9	3.9	5.2
Girls	14.9	6.2	2.3	2.9	3.7
Boys	19.3	7.3	3.4	4.9	6.7
Whites	17.2	4.4	2.0	2.2	3.8
Blacks	15.8	6.8	3.2	4.9	5.6
Hispanics	18.6	7.4	2.7	3.3	5.3
End of 7th Grade					
Overall	33.1	15.6	6.9	6.0	10.9
Girls	34.1	17.0	6.9	5.9	10.8
Boys	32.1	14.3	6.9	6.1	10.9
Whites	28.6	11.9	4.6	3.6	10.2
Blacks	31.2	14.3	6.2	5.6	9.7
Hispanics	38.9	19.7	9.0	8.0	12.9
End of 8th Grade					
Overall	40.7	21.0	10.7	8.6	17.2
Girls	41.9	21.9	11.1	8.1	17.1
Boys	39.7	20.2	10.3	9.0	17.3
Whites	44.0	22.7	13.1	9.6	18.4
Blacks	38.2	17.6	8.4	7.1	16.9
Hispanics	45.9	27.0	14.1	11.8	19.3

As shown in the table, boys have higher rates of alcohol use compared to girls until eighth grade when the girls' rates of drinking overall, in the past month, and in the past week are higher than boys. This finding is comparable to national findings. Racial/ethnic differences in alcohol use among youth in Project Northland Chicago appear to differ from national findings. Specifically, White students have the lowest rates of alcohol use in each year in each category except for past year alcohol use in sixth

grade and eighth grade rates of ever drunk. In both of these categories, Whites' rates are higher than Blacks'. National findings show that Whites have higher use rates than Blacks in all use categories in eighth grade except for lifetime alcohol use. These differences could suggest that Black youth in Chicago are using alcohol more frequently than White youth as compared to the national average for those age and racial/ethnic groups. However, use rates among all racial/ethnic groups in eighth graders from Project Northland Chicago are lower than the national averages.

1.2.6 Early Users of Alcohol Use

PNC is an adaptation of Project Northland, which was originally developed and evaluated in rural northern Minnesota (Komro et al., 2005; Komro et al., 2006; Perry et al., 1993). Project Northland significantly reduced alcohol use onset and prevalence by the end of eighth grade, after three years of an intensive multiple component intervention (Perry et al., 1996). However, among the 37% of students who reported having ever had a drink of alcohol at baseline, when they were sixth grade students in 1991, the intervention was less effective (Perry et al., 1996). The baseline users of alcohol had a higher prevalence of alcohol use than baseline non-users throughout the intervention period (Perry et al., 1996), suggesting that the intervention did not work as well with baseline users of alcohol. Among sixth graders in the Project Northland Chicago intervention, users and non-users of alcohol have been shown to be significantly different groups with separate risk factors for alcohol use and intentions to use alcohol (Pasch et al., 2006). This research suggests that it is important to further explore how differences in risk and