The Epidemiology of Alcohol, Tobacco and Other Drug Use among Black Youth*

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ABSTRACT. *Objective:* Although there is a growing literature on racial/ethnic differences in alcohol, tobacco and other drug use among adolescents, relatively little is known about the social epidemiology of drug use *within* the black youth population. The purpose of this article is to address this knowledge gap. *Method:* Data from the Monitoring the Future Project are used to examine empirically the prevalence, trends and sociodemographic correlates of drug use among nationally representative samples of black eighth, tenth and twelfth graders (approximate $N = 25,000$). *Results:* Alcohol is the drug most widely used by black youth, followed by tobacco and marijuana. By twelfth grade, seven in 10 black secondary students have used alcohol, less than 50% have smoked cigarettes, 25% have used marijuana and less than 2% have used cocaine. Trend data indicate that, although alcohol use has been relatively stable over time, cigarette and marijuana use are increasing. Gender and family structure are significant sociodemographic correlates of drug use, with use being, on average, higher among males than females, and higher among students who do not live with either of their parents than among those who live with at least one of their parents. The relationships between drug use and socioeconomic status, urbanicity and region vary depending on students' grade level and the specific drug in question. *Conclusions:* These findings provide an important empirical baseline for future research on the epidemiology and etiology of drug use among young black people. (*J. Stud. Alcohol* **60:** 800-809, 1999)

DESPITE AN ABUNDANCE of research on white adolescent's use of alcohol, tobacco, marijuana and other drugs, there is a paucity of information on the prevalence, trends and correlates of drug use specific to the nation's largest minority adolescent group—blacks. The limited body of research that examines drug use among black youth has appeared only recently and typically focuses on explaining racial/ethnic *differences* in drug use rather than on the heterogeneity of drug use patterns *within* the black youth population (Bachman et al., 1991; Maddahian et al., 1986; Newcomb et al., 1987; Prendergast et al., 1989; Wallace and Bachman, 1991; Wallace et al., 1995; Welte and Barnes, 1987).

Findings from the race difference literature reveal that drug use is, on average, lower among black youth than among white and Latino youth (Bachman et al., 1991; Prendergast et al., 1989). Having said this, however, it should be noted that there is evidence that black youth who use drugs experience more negative consequences than their nonblack peers. For example, a large statewide study of New York State seventh through twelfth graders found that the average number of alcohol-related problems that black drinkers experienced was higher than the number experienced by white drinkers, despite the fact that black drinkers consumed less alcohol than their white counterparts (Welte and Barnes, 1987).

Although race comparative studies are useful, particularly for theory development and identification of the general prevalence and etiology of substance use among young people, they shed little light on the heterogeneity of drug use patterns, trends and correlates within various subgroups of the general population. Although black youth are often included in general population studies of drug use, relatively little is known about the variability in drug use patterns, trends and correlates within the black youth population. Given the wide variability in blacks' family structures, socioeconomic circumstances and places of residence, it is important to investigate the epidemiology of drug use within the diverse population of black youth.

Because the heterogeneity of black adolescents' drug use has not been thoroughly examined, stereotypes, rather than empirically based research findings, have often shaped public perceptions. Furthermore, because of the lack of research on black adolescents, very basic questions about the social epidemiology of their drug use are unanswered. These basic, yet important, unanswered questions include, but are not limited to, the following: Are there substantial gender differences in black adolescents' drug use? What is the impact of living in a single-parent family on black adolescents' drug use? Given the link between low economic status and drug

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use, are black youth who are socioeconomically disadvantaged more likely to use drugs than are those who are socioeconomically more advantaged? To date, answers to these and other important questions, particularly in the national context, are unknown. In an effort to address these important gaps in our knowledge about drug use among the United States' largest nonwhite adolescent population, the present study investigates the prevalence, trends and sociodemographic correlates of alcohol, tobacco, marijuana and cocaine use among nationally representative samples of over 25,000 black secondary school students.

Method

The data used for the study are drawn from the University of Michigan's Monitoring the Future Project. The design and methods are summarized briefly below; a detailed description is available elsewhere (Bachman et al., 1996; Johnston et al., 1996). The study employs a multistage sampling design to obtain nationally representative samples of secondary school students (i.e., eighth, tenth and twelfth graders) from the 48 contiguous states. Data have been collected annually from high school seniors since 1975. Beginning in 1991 data have been collected annually from eighth and tenth graders. The sampling procedure involves three stages (Kish, 1965): first, geographic regions are selected; second, schools are selected (without replacement)—approximately 135 schools for twelfth graders, 125 for tenth graders, and 160 for eighth graders; third, students—approximately 49,000 (18,000 eighth graders, 15,000 tenth graders, 16,000 twelfth graders)—are selected from within each school. Sample weights are assigned to each student to take into account school sample sizes, as well as any variations in selection probabilities that occurred at earlier stages of the sampling procedures. The analyses presented here are based on weighted data.

Given the present focus on the epidemiology of drug use *within* the black adolescent population, the analyses presented here are limited to young people who self-identify as "Black" or "African American." Black students constitute 12% to 15% of the annual samples. In the present study data from 1991 to 1994 are combined in order to provide sufficient numbers of respondents to allow reasonable inferences regarding the black youth population. Combining data from 1991 to 1994 resulted in an overall sample size of approximately 25,000 respondents (9,900 for eighth graders, 7,300 for tenth graders, and 7,800 twelfth graders). Because of the large sample size, sampling errors are very small; any relationship that we treat as substantively important far exceeds conventional standards for statistical significance. Analyses of trends are based on data from 1976 through 1994.

Students complete self-administered, machine-readable questionnaires during a normal class period. Overall questionnaire response rates average about 84% for twelfth graders, 86% for tenth graders and 90% for eighth graders. Absence on the day of data collection is the primary reason that students are missed; it is estimated that less than 1% of students refuse to complete the questionnaire.

Measures

This study is concerned with the prevalence, trends and sociodemographic distribution of drug use among black youth. The drug use measures ask about students' lifetime, annual, 30-day and daily use of tobacco, alcohol, marijuana and cocaine. (Analyses on a wider range of drugs, including inhalants, LSD, other psychedelics, heroin, stimulants, tranquilizers and steroids are available from the authors). In addition to students' grade level, the sociodemographic measures include students' gender, family structure, parental education (as a proxy for socioeconomic status) and the urbanicity and region of their place of residence. The exact wording of the drug use and sociodemographic measures is provided in the Appendix.

Results

Sample description

Table 1 displays the demographic characteristics of the samples. Females comprise 53% of the eighth-grade black sample and 55% of the tenth- and twelfth-grade samples. In terms of family structure, 10-11% of black secondary students do not live with either of their parents, 41-47% live with one parent and approximately 50% of the eighth and tenth graders and 42% of the twelfth graders live in two-parent families. There is considerable variability in students' parents' education; however, a majority of students' parents have at least completed high school and a substantial proportion have some college experience or more. Approximately 33% of black secondary students live in the 16 largest Metropolitan Statistical Areas (MSAs), about 40% live in the remaining MSAs and 25% reside in areas not designated as MSAs. More than 50% live in the South, roughly 10-15% live in the Northeast, 15-20% live in the North Central region and 10% or less live in the West.

Prevalence of drug use

Table 2 presents data on the lifetime, annual, thirty-day and daily prevalence of selected drugs for black eighth, tenth and twelfth graders. The drugs most prevalent among black secondary students are those that are legal for use by adults—cigarettes and alcohol. Nationally, between 35% and 45% have smoked cigarettes in their lifetime, but 10% or less are current smokers (any use in the last 30 days) at any grade level and only 1-2% are regular heavy smokers (half a pack or more of cigarettes per day). Roughly 50-75% have used alcohol in their lifetime, 34% or less report being current

TABLE 1. Demographic characteristics of black secondary school students by year in school, 1991-94 data combined

	Eighth grade		Tenth grade		Twelfth grade	
	Weighted *N*	%	Weighted *N*	%	Weighted *N*	%
Total	9,936	100.0	7,336	100.0	7,807	100.0
Gender						
Male	4,571	46.8	3,264	45.2	3,425	45.1
Female	5,201	53.2	3,957	54.8	4,168	54.9
Parents in household						
0 parents	1,001	10.2	767	10.5	875	11.4
1 parent	4,095	41.7	2,961	40.7	3,609	47.1
2 parents	4,715	48.1	3,556	48.8	3,185	41.5
Parents' education[a]						
1.0-2.0 (low)	846	9.5	618	8.9	799	10.8
2.5-3.0	2,586	28.8	2,403	34.8	2,415	32.7
3.5-4.0	2,534	28.2	2,000	28.9	2,292	31.0
4.5-5.0	2,092	23.3	1,386	20.0	1,335	18.1
5.5-6.0 (high)	913	10.2	509	7.4	544	7.4
Urbanicity						
Large MSA	3,384	34.1	2,280	31.1	2,638	33.8
Other MSA	4,102	41.3	3,176	43.3	3,241	41.5
Non MSA	2,449	24.6	1,880	25.6	1,928	24.7
Region						
Northeast	1,523	15.3	691	9.4	1,178	15.1
North central	1,941	19.5	1,226	16.7	1,159	14.8
South	5,497	55.3	4,865	66.3	5,131	65.7
West	975	9.9	554	7.6	340	4.4

[a]Parents' education is an average score of mother's education and father's education (or educational level of other primary caregivers) reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data were allowed on one of the two variables.

drinkers, 3 percent or less indicate that they drink daily (20 or more occasions in the past 30 days) and 15% or less report having five or more drinks in a row, in a single sitting, within the last 2 weeks.

Although marijuana is the illicit drug most widely used by black secondary students, approximately 25% or less of our sample have used it in their lifetime. Annual marijuana prevalence rates for students in the eighth, tenth and twelfth grades are 7%, 11% and 16%, respectively. Thirty-day marijuana use ranges from about 4% among eighth graders to about 10% among twelfth graders. Cocaine use is very low among black students: less than 2% report lifetime use and 1% or less report annual or 30-day use.

Trends

Based on past research (Bachman et al., 1991), we know that there were significant declines in drug use among black (and other) youth throughout the 1980s. Figure 1 presents trends for twelfth graders from 1976 to 1994 and for eighth and tenth graders from 1991 to 1994, for 30-day tobacco use, 30-day alcohol use, annual marijuana use and annual cocaine use.

The decline in drug use that occurred during the 1980s has not continued into the 1990s. In fact, the data show that "gateway" drug use—tobacco, alcohol and marijuana—is actually on the increase (see Figure 1). For example, at its peak in the late 1970s, the 30-day prevalence of cigarette use among black twelfth graders was approximately 37%; by 1992 it had declined to less than 9%. By 1994, however, black twelfth graders' 30-day cigarette prevalence had increased slightly to almost 11%. The data show, that between 1991 and 1994, the 30-day prevalence of cigarette use among eighth and tenth graders had also increased. The 30-day prevalence of alcohol use among black seniors declined gradually from approximately 50% in 1976-77 to about 30% in 1991-92 (see Figure 1). From 1992 to 1994 there was a slight increase in alcohol use among seniors and eighth graders and a slight decrease among tenth graders. Given that these increases are small and inconsistent across grade levels, additional data will be necessary to assess the extent to which these patterns reflect genuine trends. Between its peak in 1978 and its low in 1990-91 there was a significant decline in annual marijuana use (Figure 1). From 1990-91 to 1994, however, eighth, tenth and twelfth graders annual marijuana use doubled. Unlike cigarette, alcohol and marijuana use, cocaine use did not show an increase for this group. Since its peak between 1982 and 1983, annual cocaine use among black seniors declined to about 1% by 1994, which was also the prevalence rate among eighth and tenth graders (see Figure 1).

The sociodemographic correlates of drug use

Table 3 presents data on the relationship between drug use and key sociodemographic factors—gender, family struc-

TABLE 2. Lifetime, annual, 30-day and selected daily prevalences of drug use and 95% Confidence Intervals (CI) for black secondary school students, 1991-94 data combined

	Lifetime		Annual		30-day		Daily	
Drug	%	95% CI	%	95% CI	%	95% CI	%	95% CI
Eighth graders								
Cigarettes	35.0	33.0-37.0	–	–	7.2	6.3-8.3	2.1	1.4-2.9
Half a pack or more of cigarettes per day	–	–	–	–	–	–	0.7	0.3-1.2
Alcohol[a]	55.1	50.4-59.8	40.7	36.0-45.4	19.4	15.8-23.2	1.2	0.3-2.5
5 or more drinks in a row in last 2 weeks	–	–	–	–	10.8	8.9-12.9	–	–
Marijuana	10.7	9.1-12.5	6.8	5.5-8.2	3.7	2.8-4.8	0.3	0.0-1.0
Cocaine	1.2	0.8-1.7	0.7	0.3-1.2	0.4	0.0-0.9	–	–
Tenth graders								
Cigarettes	40.3	37.9-42.7	–	–	8.0	6.7-9.5	3.3	2.5-4.2
Half a pack or more of cigarettes per day	–	–	–	–	–	–	1.0	0.6-1.5
Alcohol	68.1	63.0-73.0	56.2	50.9-61.5	29.7	24.8-34.8	1.2	0.3-2.5
5 or more drinks in a row in last 2 weeks	–	–	–	–	14.6	12.0-17.4	–	–
Marijuana	18.9	16.4-21.6	11.1	9.3-13.1	6.4	5.1-7.8	0.5	0.0-1.2
Cocaine	1.4	1.0-1.9	0.7	0.3-1.2	0.4	0.0-0.9	–	–
Twelfth graders								
Cigarettes	44.3	41.9-46.7	–	–	9.8	8.5-11.3	4.5	3.6-5.6
Half a pack or more of cigarettes per day	–	–	–	–	–	–	1.7	1.3-2.2
Alcohol	71.4	66.3-76.3	59.8	54.5-65.1	33.8	28.9-38.9	2.6	0.9-4.7
5 or more drinks in a row in last 2 weeks	–	–	–	–	12.8	10.2-15.6	–	–
Marijuana	26.1	23.2-29.2	15.9	13.7-18.2	9.5	7.7-11.5	1.2	0.7-1.9
Cocaine	1.9	1.5-2.4	1.1	0.7-1.6	0.6	0.2-1.1	–	–

Note: The minimum weighted *N* is 8,779 for eighth grade, 6,776 for tenth grade and 7,077 for twelfth grade.
[a]In 1993 the alcohol prevalence question text was changed in half of the forms for each grade to indicate that a "drink" meant "more than few sips." In 1994 all forms of the questionnaires were changed to reflect this wording change. 1991 and 1992 data are not included in the data presented here for use of alcohol. Data presented here are based on the revised question text for 1993 and 1994. The *N* is 3,637 for eighth grade, 2,318 for tenth grade and 2,487 for twelfth grade.

ture, parental education, population density and region, for black eighth, tenth and twelfth grade students. Chi-square analyses were used to determine the statistical significance of the relationships.

Gender. Drug use patterns among eighth, tenth and twelfth grade male students were compared with those among female students in the corresponding grades in order to ascertain the extent to which there are important gender differences in black secondary students' drug use. On average, the male students report significantly ($p < .05$) higher cigarette, alcohol, marijuana and cocaine use than do the female students. Generally, the magnitude of the gender differences tends to be relatively small among eighth graders, somewhat larger among tenth graders and largest among twelfth graders.

Family composition. The data presented in Table 3 suggest that on average, drug use is highest among young people who do not live with either parent, at an intermediate level among those who live with one parent and lowest among those who live with both parents. It should be noted, however, that the differences in drug use between secondary students who live with one parent versus those who live with two parents are often quite small or nonexistent; it is among the 10-11% of black youth who do not live with either of their parents that alcohol, tobacco and other drug use is particularly high.

Parents' educational level. Parent's education, a proxy for students' socioeconomic status, is a five-category measure that averages student's mother's and father's educational attainment (see Appendix for coding scheme). If only one parent's education is reported, then that information is used. Although there is a trend toward lower levels of drug use among youth as parents' level of education increases, the relationship varies across drugs and grade level. For example, eighth and tenth graders whose parents have the least education have the highest cigarette and cocaine prevalence rates. On the other hand, there are no significant differences in cigarette, alcohol, marijuana or cocaine prevalence rates linked to parents' education for twelfth graders.

Urbanicity. Many individuals have the impression that drug use is a "big-city" problem. Our results indicate that the relationship between urbanicity and drug use varies considerably by drug. For example, there are significant relationships between urbanicity and 30-day cigarette use for tenth and twelfth graders and between alcohol and urbanicity for tenth graders; use of these drugs is actually higher in small nonurban areas than in large urban areas. On the other hand,

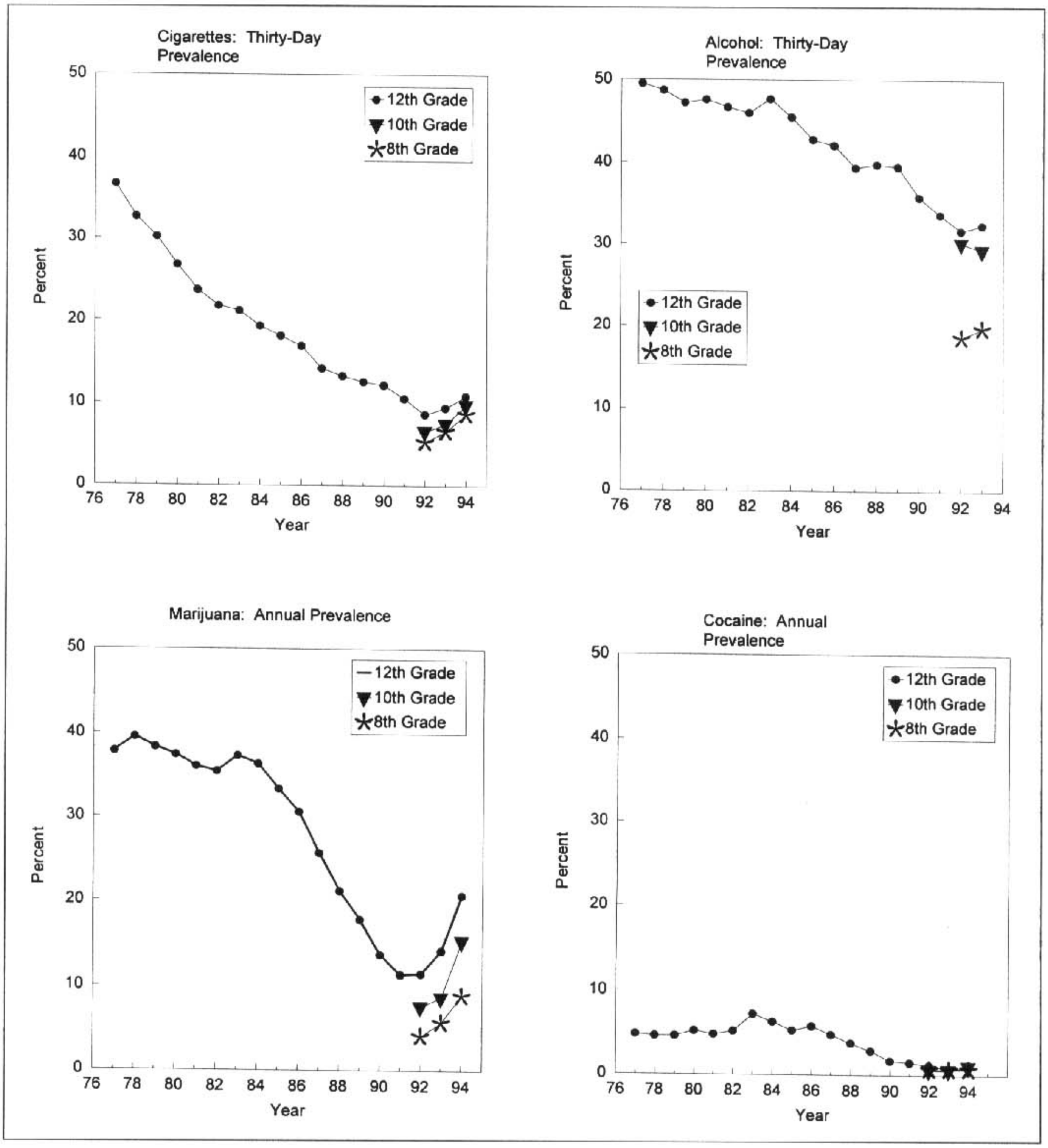

FIGURE 1. Trends in use of select drugs for black secondary school students by grade, 2-year moving averages. (Each year's percent is the mean of data for that year and the previous year. We use 2-year moving averages to increase the reliability of our estimates as well as to smooth out sampling fluctuation.)

annual marijuana use is lowest in nonurban areas, across all three grade levels. The relationship between annual cocaine use and urbanicity is significant only for twelfth graders, with use consistently lower than average in large urban areas.

Region. The regional pattern of cigarette prevalence is comparable across all three grades but the relationship is significant only for tenth graders; use is highest in the Northeast followed by the North Central region, the South and the

TABLE 3. Prevalence of substance use by subgroups for eighth-, tenth- and twelfth-grade black secondary school students, 1991-94 data combined

	Eighth grade				Tenth grade				Twelfth grade			
	Cigarette 30-day	Alcohol 30-day[a]	Marijuana annual	Cocaine lifetime	Cigarette 30-day	Alcohol 30-day[a]	Marijuana annual	Cocaine lifetime	Cigarette 30-day	Alcohol 30-day[a]	Marijuana annual	Cocaine lifetime
Total	7.2	19.4	6.8	1.2	8.0	29.7	11.1	1.4	9.8	33.8	15.9	1.9
Gender												
Male	7.8	20.6	8.6	1.5	8.8	33.9	14.7	1.9	11.2	41.7	21.7	2.3
Female	6.7	18.3	5.1	1.0	7.3	26.0	8.1	0.9	8.2	28.1	10.9	1.4
χ^2	*	NS	†	*	*	†	†	†	†	†	†	†
Parents in household												
0 parents	13.9	25.0	9.5	3.8	10.9	36.5	15.9	3.6	11.7	40.2	19.2	3.2
1 parent	7.4	20.4	7.4	0.8	7.9	29.6	11.3	1.1	10.0	35.0	16.7	1.5
2 parents	5.6	17.4	5.6	0.9	7.4	27.9	9.8	1.0	8.8	31.0	14.2	2.0
χ^2	†	†	†	†	†	*	†	†	*	†	†	†
Parents' education[b]												
1.0-2.0 (low)	9.4	20.2	8.0	3.0	12.9	29.9	11.7	3.1	12.3	29.8	15.8	2.9
2.5-3.0	6.5	22.6	6.3	0.7	8.7	34.1	10.8	0.8	9.9	32.8	15.2	1.7
3.5-4.0	8.0	20.2	8.1	1.2	6.0	27.4	11.8	1.5	9.8	37.1	17.2	2.3
4.5-5.0	6.4	17.2	6.2	1.2	7.7	26.7	10.2	0.9	8.2	32.7	15.6	1.7
5.5-6.0 (high)	6.8	21.7	6.6	1.6	7.1	24.1	11.7	2.3	9.4	29.4	13.9	1.0
χ^2	†	NS	*	†	†	†	NS	†	NS	NS	NS	NS
Urbanicity												
Large MSA	6.7	17.9	8.3	1.2	7.6	27.9	12.6	1.2	7.3	32.6	15.9	1.0
Other MSA	7.7	19.9	7.2	1.2	7.0	27.6	12.5	1.5	9.3	33.1	17.7	2.6
Non MSA	6.9	20.4	4.0	1.3	10.3	35.2	7.0	1.4	14.1	36.4	13.0	2.1
χ^2	NS	NS	†	NS	†	†	†	NS	†	NS	†	†
Region												
Northeast	7.8	12.7	5.8	1.0	13.3	24.0	16.5	2.5	11.1	34.4	18.1	1.8
North Central	7.5	21.5	10.6	1.3	10.1	36.2	16.1	1.5	10.2	39.8	24.4	1.9
South	7.1	19.8	4.8	1.3	7.1	29.9	8.6	1.1	9.5	31.8	12.6	1.7
West	6.0	20.8	12.0	1.5	5.4	27.6	15.9	2.5	8.9	34.4	30.5	6.0
χ^2	NS	†	†	NS	†	*	†	†	NS	†	†	†

Note: Level of significance of difference between groups: *$p = .05$; †$p = .01$; NS = not significant.
[a]See footnote "a" Table 2.
[b]See footnote "a" Table 1.

West. Alcohol use is highest in the North Central region, across all three grade levels. Marijuana and cocaine prevalence rates vary by region, with use generally being lowest in the South, across all three grade levels.

Multivariate models

We estimated a series of logistic regression models to determine the extent to which the bivariate relationships reported above hold when the sociodemographic factors are simultaneously controlled. The results of the analyses are presented in Table 4a and 4b. The models were estimated separately for eighth, tenth and twelfth graders for each of the drugs. In order to facilitate interpretation, the logistic regression coefficients are presented in the form of odds ratios. An odds ratio of 1 indicates no effect, an odds ratio greater than 1 indicates an increased chance of an event occurring versus not, and an odds ratio less than 1 indicates a decreased chance of an event occurring versus not. For example (see column 1 of Table 4a), the odds ratio for monthly cigarette use among male versus female eighth graders (i.e., the reference category) is 1.23. This indicates that the odds of monthly cigarette use are about 1.23 times as large for boys as they are for girls in the eighth grade. Put another way, eighth-grade boys are 23% more likely than eighth-grade girls to have smoked in the last 30 days.

Consistent with the bivariate findings, the data presented in Table 4 indicate that male black adolescents are, on average, significantly more likely than female black adolescents to use drugs. This conclusion is generally consistent across grade level and for each of the four drugs. It should be noted, however, that the gender differences in 30-day alcohol use and lifetime cocaine use for eighth graders are not significant.

Like gender, family structure continues to be significantly related to black adolescents' drug use, controlling for other factors. In general, drug use is lower among young people who live with both parents than among young people who do not live with both parents. The disparity in use is particularly large between students who live with both of their parents and those who do not live with either parent. One somewhat anomalous finding is that twelfth graders who live with one parent are only two-thirds as likely to have used cocaine as those who live with both parents, controlling for other factors.

Parents' education is not strongly related to black secondary students' drug use. Although there are some exceptions to this conclusion (see Tables 4a and 4b), in general, when other sociodemographic factors are controlled, black

TABLE 4a. Adjusted odds ratios from logistic regression models predicting monthly cigarette and alcohol use among black secondary school students by year in school, 1991-94 data combined

	30-day cigarette use						30-day alcohol use					
Predictors	Eighth grade	95% CI	Tenth grade	95% CI	Twelfth grade	95% CI	Eighth grade	95% CI	Tenth grade	95% CI	Twelfth grade	95% CI
Gender												
Male	1.23*	1.04-1.46	1.26†	1.05-1.51	1.45†	1.23-1.71	1.03	0.92-1.16	1.52†	1.36-1.70	2.13†	1.90-2.39
Female[a]	–		–		–		–		–		–	
Parents in household												
0 parents	2.48†	1.93-3.18	1.37*	1.03-1.84	1.24	0.95-1.62	1.39†	1.15-1.69	1.47†	1.22-1.77	1.58†	1.31-1.92
1 parent	1.35†	1.13-1.63	1.07	0.88-1.31	1.23*	1.03-1.47	1.25	1.11-1.41	1.16	1.03-1.31	1.18	1.05-1.34
2 parents[a]	–		–		–		–		–		–	
Parents' education[b]												
1.0-2.0 (low)	1.34	0.92-1.95	1.88†	1.21-2.92	1.19	0.81-1.75	0.98	0.75-1.27	1.08	0.81-1.44	1.10	0.83-1.45
2.5-3.0	0.93	0.68-1.29	1.33	0.90-1.97	0.90	0.64-1.27	0.96	0.78-1.19	1.18	0.94-1.49	1.10	0.87-1.40
3.5-4.0	1.22	0.90-1.67	0.92	0.61-1.37	0.96	0.68-1.35	1.02	0.83-1.26	1.10	0.87-1.38	1.11	0.88-1.41
4.5-5.0	0.96	0.69-1.33	1.15	0.77-1.74	0.84	0.58-1.22	0.97	0.78-1.20	1.13	0.89-1.45	1.00	0.78-1.29
5.5-6.0 (high)[a]	–		–		–		–		–		–	
Urbanicity												
Large MSA	0.97	0.72-1.31	0.58†	0.45-0.76	.39†	0.30-0.49	0.76†	0.63-0.93	0.62†	0.53-0.72	0.65†	0.55-0.77
Other MSA	1.25	0.99-1.57	0.59†	0.46-0.74	.52†	0.42-0.64	0.97	0.83-1.13	0.63	0.55-0.72	0.75	0.65-0.88
Non MSA[a]	–		–		–		–		–		–	
Region												
Northeast	1.20	0.84-1.70	2.88†	1.79-4.65	1.28	0.82-2.00	0.81	0.64-1.03	1.07	0.81-1.42	0.83	0.62-1.13
North Central	1.21	0.87-1.70	2.12†	1.35-3.34	1.01	0.65-1.59	1.34†	1.08-1.67	1.35*	1.05-1.72	1.24	0.92-1.68
South	1.00	0.72-1.38	1.14	0.74-1.76	0.75	0.49-1.14	0.91	0.73-1.12	1.05	0.84-1.31	0.74*	0.56-0.96
West[a]	–		–		–		–		–		–	
Model chi-square	74.95†		96.25†		106.44†		55.40†		137.80†		261.02†	
Degrees of freedom	12		12		12		12		12		12	
Base *N*'s	9,115		7,033		7,415		8,298		6,657		6,080	

*$p \leq .05$; †$p \leq .01$.
[a]Contrast category.
[b]See footnote "a" Table 1.

TABLE 4b. Adjusted odds ratios from logistic regression models predicting annual marijuana and lifetime cocaine use among black secondary school students by year in school, 1991-94 data combined

	Annual marijuana use						Lifetime cocaine use					
Predictors	Eighth grade	95% CI	Tenth grade	95% CI	Twelfth grade	95% CI	Eighth grade	95% CI	Tenth grade	95% CI	Twelfth grade	95% CI
Gender												
Male	1.77†	1.49-2.10	2.10†	1.79-2.47	2.27†	1.98-2.61	1.19	0.80-1.77	2.15†	1.38-3.34	1.54*	1.07-2.21
Female[a]	–		–		–		–		–		–	
Parents in household												
0 parents	1.85†	1.41-2.44	1.76†	1.38-2.26	1.43†	1.15-1.78	3.33†	2.04-5.44	3.44†	1.99-5.93	1.36	0.83-2.22
1 parent	1.42†	1.18-1.70	1.18	0.99-1.39	1.29†	1.12-1.49	0.84	0.52-1.34	1.09	0.67-1.79	0.67*	0.45-0.99
2 parents[a]	–		–		–		–		–		–	
Parents' education[b]												
1.0-2.0 (low)	1.46*	0.99-2.15	1.18	0.81-1.74	1.27	0.91-1.78	1.78	0.87-3.62	1.20	0.54-2.67	2.87	0.98-8.44
2.5-3.0	1.13	0.82-1.56	1.11	0.81-1.52	1.14	0.85-1.52	0.46*	0.22-0.96	0.38†	0.18-0.81	2.09	0.76-5.74
3.5-4.0	1.37*	1.01-1.87	1.13	0.82-1.54	1.26	0.94-1.67	0.78	0.40-1.52	0.69	0.34-1.39	2.52	0.93-6.86
4.5-5.0	0.95	0.68-1.32	0.85	0.61-1.19	1.04	0.76-1.41	0.68	0.33-1.38	0.41*	0.18-0.93	1.70	0.59-4.90
5.5-6.0 (high)[a]	–		–		–		–		–		–	
Urbanicity												
Large MSA	1.45*	1.05-2.00	1.67†	1.30-2.13	0.94	0.77-1.15	1.06	0.53-2.09	0.75	0.40-1.41	0.40†	0.22-0.71
Other MSA	1.66†	1.26-2.18	1.61†	1.28-2.03	1.09	0.91-1.31	0.95	0.56-1.61	0.94	0.54-1.64	0.99	0.63-1.55
Non MSA[a]	–		–		–		–		–		–	
Region												
Northeast	0.39†	0.29-0.53	1.00	0.72-1.39	0.54†	0.40-0.74	0.66	0.29-1.52	0.75	0.33-1.69	0.45*	0.22-0.91
North Central	0.78	0.60-1.02	1.02	0.76-1.38	0.81	0.61-1.09	1.00	0.48-2.09	0.53	0.25-1.13	0.36†	0.18-0.74
South	0.35†	0.27-0.46	0.53†	0.40-0.70	0.35†	0.27-0.46	0.90	0.44-1.85	0.39†	0.20-0.75	0.30†	0.16-0.55
West[a]	–		–		–		–		–		–	
Model chi-square	05.36†		212.27†		299.13†		50.67†		54.62†		50.99†	
Degrees of freedom	12		12		12		12		12		12	
Base *N*'s	9,214		7,120		7,425		9,294		7,193		7,572	

*$p \leq .05$; †$p \leq .01$.
[a]Contrast category.
[b]See footnote "a" Table 1.

students with highly educated parents are no less likely to use drugs than are students with less educated parents.

The relationship between drug use and urbanicity varies by grade level and by drug. On the one hand, cigarette use and alcohol use are generally higher among students who live in nonurban areas than among those who live in large and small cities. On the other hand, marijuana use among eighth and tenth graders is higher for students who live in large and small cities than for those who live in nonurban areas. For cocaine, the only statistically significant finding is that the prevalence of cocaine use is lower among twelfth-grade black students from large urban areas than among their nonurban counterparts.

Controlling for other sociodemographic factors, regional differences in drug use continue to vary across grade level and by the specific drug in question. For example, although cigarette use is typically higher in the Northeast and North Central regions than in the West (the reference category), the difference is only significant among tenth graders. Alcohol use is comparable across regions, with the exceptions that it is higher among North Central eighth and tenth graders than among eighth and tenth graders in the West and lower among twelfth graders in the South than among their counterparts in the West. Marijuana use is higher in the West than in the South across all three grade levels and higher than in the Northeast for eighth graders and twelfth graders. Cocaine use also appears to be relatively high in the West, with the difference being statistically significant compared to tenth graders in the South and to twelfth graders in the Northeast, North Central and South. Tests for statistical interactions among the sociodemographic factors did not yield statistically significant findings.

Discussion

The results of the study indicate that by twelfth grade less than 50% of black secondary students have smoked cigarettes, 70% have used alcohol, 25% have used marijuana and less than 2% have used cocaine. Current (30-day) use of cigarettes and of alcohol, marijuana and cocaine is less than 10%, 34%, 10% and 1%, respectively. Measures of heavy use indicate that less than 2% of black students smoke half a pack or more of cigarettes per day, 15% or less report heavy drinking within the last 2 weeks, and 1% or less use marijuana or cocaine on a daily basis. Data on the sociodemographic correlates of drug use among black secondary students indicate that, on average, drug use is higher among black male than black female students, among those who do not live with either of their parents compared to those who live with at least one of their parents. Both bivariate and multivariate analyses show that the relationships between black students' drug use and socioeconomic status (parents' education), urbanicity and region vary, depending on students' grade level and the specific drug in question.

The limitations of school-based research on adolescent drug use, in general, and on minority youth, in particular, have been detailed elsewhere (Bachman et al., 1990, 1991; Wallace and Bachman, 1993). Nevertheless, several of these issues merit repeating here. The key limitations and concerns relate to the generalizability of the findings and the extent to which the findings are reliable and valid. Perhaps the primary limitation of samples of students is the fact that they do not include dropouts, homeless youth and other young people who are not in school. The extent to which the results discussed here generalize to the approximately 16% of black youth who drop out nationally (Owings and Peng, 1992) and the other relatively small proportions who are not in school (e.g., homeless) is unknown. Although dropping out may have an impact on data for seniors it is expected to have relatively little influence on eighth and tenth grade data. Given that the majority of secondary-school-aged blacks are in school, the findings are applicable to the majority of black youth (Oetting and Beauvais, 1990).

The reliability and validity of self-reported drug use among young people, and among black youth in particular, has been an issue of concern and empirical research (for a detailed discussion of this issue see Bachman et al., 1991; Kandel, 1995; Oetting and Beauvais, 1990; Owings and Peng, 1992; Wallace and Bachman, 1993). While researchers recognize that there is some level of misreporting in virtually all survey data, the findings of past research suggest that black (and other) youth provide data about their use of drugs that are, on the whole, both reliable and valid (Oetting and Beauvais, 1990; Wallace and Bachman 1993).

Although the present study provides an important baseline information on the epidemiology of drug use within the black youth population, it has only scratched the surface of this important yet understudied area of research. Whereas a large body of research has identified key contextual, interpersonal and individual risk and protective factors for adolescent drug use in the general population (e.g., Hawkins et al., 1992), no such body of research exists for black youth. Accordingly, a central task for future studies of drug use within the black youth population is to verify the extent to which important correlates of drug use identified in the general population are also key correlates of black adolescents' drug use. Furthermore, whereas many of the risk and protective factors identified by past research may also significantly relate to black's drug use, historical and contemporary differences between black and other U.S. youth (around issues of racial identity, discrimination, poverty and persistent race-based residential segregation, for example) are likely to have unique effects on black adolescent's drug use, above and beyond the various risk and protective factors identified in research on the general population.

Age-related differences in blacks' use of alcohol and other drugs is another potentially fruitful area for future research. Although there are relatively few longitudinal studies of blacks' drug use, cross-sectional studies suggest that drug

use increases sharply among blacks after adolescence, and that the increase continues into middle adulthood (Herd, 1989). As a result of their relatively high prevalence of drug use, some black adults experience a considerable number of alcohol- and other drug-related physical, mental and social consequences. To our knowledge, the apparent mismatch between adolescents' relatively low prevalence of drug use and the relatively high level of substance use and substance-related problems experienced by some black adults has not yet been explored in a rigorous and systematic fashion. Nevertheless, the extant literature suggests several plausible and testable hypotheses.

The first explanation suggests that witnessing the relatively high rates of drug-related physical and social problems experienced by black adults may serve to deter or at least delay black adolescents' drug use. This hypothesis is consistent with Boyle and Brunswick's (1980) explanation for the decline in heroin use among young people in Harlem in the late 1960s. A second potential explanation is that some parents and families effectively "shield" black adolescents from many of the harsh realities associated with adulthood, but, as these adolescents age, some of them must deal with the circumstances and realities experienced by many other black adults (e.g., racism, poverty, unemployment, failed relationships). Unfortunately, some of these young adults may begin to abuse substances as a way to cope with their life difficulties.

Given the level of economic disadvantage that many black people experience, future research should begin to ask questions that are different from those that have been asked in the past. For example, why do so *few* black youth use drugs? What are the individual, family, cultural, institutional, community and other resources and strengths that black people use to protect the majority of black youth from drug use? How can programs, policies and practices be designed, implemented and evaluated to prevent drug use and drug-related problems from adversely affecting black youth? It is toward these and other similar questions that researchers, policy makers and practitioners concerned with the health and well-being of black children, youth and families should turn their attention.

Appendix

Drug use. The cigarette measures ask, "Have you ever smoked cigarettes?" and "How frequently have you smoked cigarettes during the past 30-days?" The response categories on the first cigarette measure range from "never" to "regularly now." The response categories on the 30-day cigarette measure range from "not at all" to "two packs or more per day." The other drug measures ask, "On how many occasions (if any) have you used (drug) in your lifetime, during the last 12 months, during the last 30-days?"

Sociodemographics. Gender is coded 1 = male, 0 = female. The family structure measure asks "Which of the following people live in the same house with you?" and has been dummy coded 1 = neither parent, 2 = one parent and 0 = both parents. Parents' education, an average of father's and mother's educational attainment, serves as a proxy measure of socioeconomic status (SES). The measure is coded: 1 = completed grade school or less, 2 = some high school, 3 = completed high school, 4 = some college, 5 = completed college, 6 = graduate or professional school after college. Urbanicity is determined by the U.S. Census Bureau's classification of the area in which the school is located (1 = large metropolitan statistical area, 2 = other metropolitan statistical area, 0 = non metropolitan statistical area). Region is determined by the geographical region of the country in which the school is located (i.e., Northeast, North Central, South, West).

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