



PATTERNS OF RECENT ALCOHOL, TOBACCO, AND OTHER DRUG USE AMONG CAUCASIAN, BLACK, AND HISPANIC STUDENTS ATTENDING RACIALLY HOMOGENEOUS AND HETEROGENEOUS SCHOOL DISTRICTS

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INTRODUCTION

Understanding racial and ethnic differences in the prevalence of substance use is increasingly important to policy as the percentage of the United States population in racial/ethnic minority groups continues to increase. Substance abusers face substantial health risks, risks of criminal behavior, and detrimental effects on life chances and prospects for socioeconomic achievement. Understanding racial/ethnic patterns in substance use is necessary if resources for substance abuse prevention and treatment are to be targeted to subgroups and individuals at highest risk.

Much of the literature on adolescent racial/ethnic differences in substance use has been based on major national surveys that have reported on drug use prevalence among three broad racial/ethnic groups - Hispanics, non-Hispanic Blacks, and non-Hispanic whites. National data show that for 12th graders, the prevalence of substance use is highest for most substances among whites, followed closely by Hispanics¹. Contrary to commonly held beliefs, blacks tend to have the lowest reported levels of use. The specific drugs used vary by ethnicity. White adolescents are more likely to use alcohol and hallucinogens, while Hispanic adolescents have higher use rates for cigarettes, crack and heroin.

Several studies have examined substance use patterns across different types of communities differentiated by population density. A recent study in Massachusetts found that rural and suburban students reported higher levels of recent alcohol use than did peers in urban areas². Cronk and Sarvela³ found that the substance use trend over time was toward higher levels of cigarette and alcohol use in rural and suburban areas while urban areas had higher levels of cocaine and marijuana use. Data from the National Household Survey on Drug Abuse have shown that individuals living in metropolitan areas with populations greater than 1 million have high prevalence of illicit drug use, regardless of racial/ethnic background⁴.

Few studies have examined adolescent use of substances in conjunction with the racial/ethnic composition of schools. The purpose of this study was to investigate whites, blacks and Hispanics' recent use of alcohol, tobacco, and other drugs in racially/ethnically homogeneous and heterogeneous school districts. It was hypothesized that substance use would vary by both school type and racial/ethnic group. It was further hypothesized that an individual's use would be congruent with the substance use behavioral patterns of the dominant school racial/ethnic culture.

METHODS

The data presented is a subset of a representative sample of 15,763 5th-12th-grade public school students in Connecticut who voluntarily completed a questionnaire as part of a statewide prevention needs assessment. Since high school dropout rates can be as high as 35% in the state among minority populations and many questions were not asked of the 5th-6th grade students, the data presented herein only represent students in the 7th-10th grades.^{5,6} The analysis was further limited to the three largest racial/ethnic groups because the numbers for Asians and Native Americans were too small. Of the 7,622 subjects selected for this study, 71.4% were non-Hispanic Caucasian, 15.2% were non-Hispanic Black/African-Americans, and 13.4% were Hispanic/Latinos. As the data in Table 1 show, the groups did not differ with respect to gender and grade.

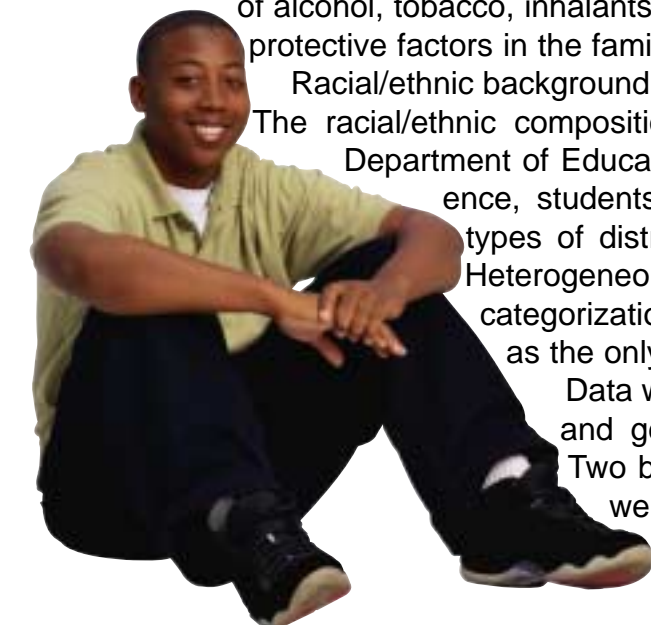
A multi-stage sampling procedure was used to ensure that a representative sample of public school students was obtained. Twenty-seven school districts participated in the original study, representing a 53% response rate⁶. The original sample was representative with respect to gender, grade, race/ethnicity, and a measure of socioeconomic status, however regional analyses could not be conducted due to difficulties obtaining school district consents in some areas.

Researchers employed passive consent procedures for parental consents. All students within classes on the survey day were invited to participate. Students were informed in writing and orally that their participation in the study was voluntary, confidential and anonymous. Students completed a self-administered questionnaire during one class period. The questionnaire measured demographic characteristics, lifetime and recent (i.e. in past 30 days) use of alcohol, tobacco, inhalants, and illicit and prescription drugs, and risk and protective factors in the family, school, community and individual domains.

Racial/ethnic background was determined based on student self-reports. The racial/ethnic composition of the district was assessed using State Department of Education enrollment data⁷. Using whites as a reference, students were categorized into attending one of two types of districts, a homogeneous Caucasian district or a heterogeneous mixed racial/ethnic district. Consequently, categorization placed Connecticut's largest urban centers as the only heterogeneous mixed districts.

Data were weighted to reflect the racial/ethnic, grade, and gender distributions of the student population.

Two by two contingency tables and chi-square tests were used to assess the differences in past month substance use by district racial/ethnic composition.



RESULTS

Table 1: Demographic Characteristics of the Sample (n=7,622)

Characteristics of Respondents	Race/Ethnicity			Total
	White	Black	Hispanic	
Gender				
Male	2771 (50.9%)	638 (55.0%)	537 (52.5%)	3946 (51.8%)
Grade				
7	1375 (25.3%)	281 (24.2%)	239 (23.4%)	1895 (24.9%)
8	1358 (25.0%)	265 (22.8%)	263 (25.7%)	1886 (24.7%)
9	1434 (26.4%)	327 (28.2%)	295 (28.8%)	2056 (27.0%)
10	1271 (23.4%)	288 (24.8%)	226 (22.1%)	1785 (23.4%)
District Racial Composition				
Homogeneous Caucasian	4979 (91.5%)	567 (48.8%)	370 (36.2%)	5916 (77.6%)
Heterogeneous Mixed	460 (8.5%)	594 (51.2%)	653 (63.8%)	1707 (22.4%)

As the data in Figure 1 show, recent substance use varies by racial/ethnic group. Hispanics, followed closely by whites, reported the highest levels of recent use. The variation of use in different types of school districts is revealed in Figure 2. Alcohol and inhalants are used by more students in the homogeneous districts while cigarettes are more common in the heterogeneous mixed districts. Figures 3-7 show that use varies by district type and ethnicity. Higher alcohol use rates were found in the homogeneous districts regardless of race/ethnicity. Cigarettes use varied by ethnicity and district type. More minority students used inhalants in homogeneous than heterogeneous schools. African-Americans reported more illicit drug use in heterogeneous districts than in the homogeneous districts. Hispanics reported higher levels of recent use for all substances in homogeneous districts.

Figure 1: Recent Use of Selected Substances by Race/Ethnicity, Grades 7-10

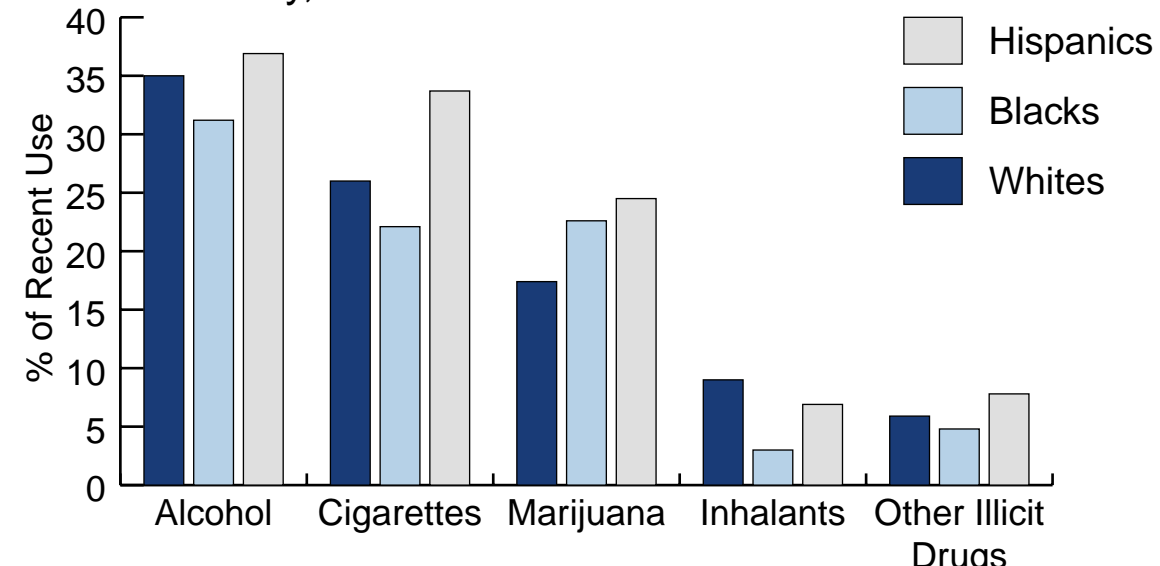
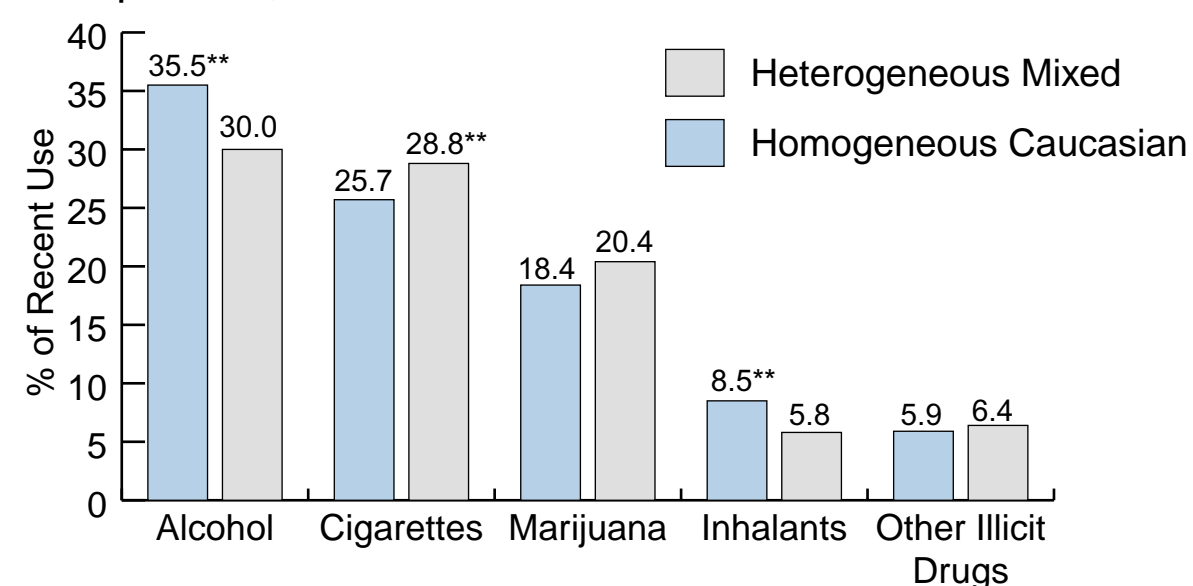


Figure 2: Recent Use of Substances by District Racial/Ethnic Composition, Grades 7-10



Other illicit drugs include cocaine, crack, heroin, hallucinogens, PCP, and ecstasy. ** - p < .01

Figure 3: Recent Alcohol Use by Race and District Racial/Ethnic Composition, Grades 7-10

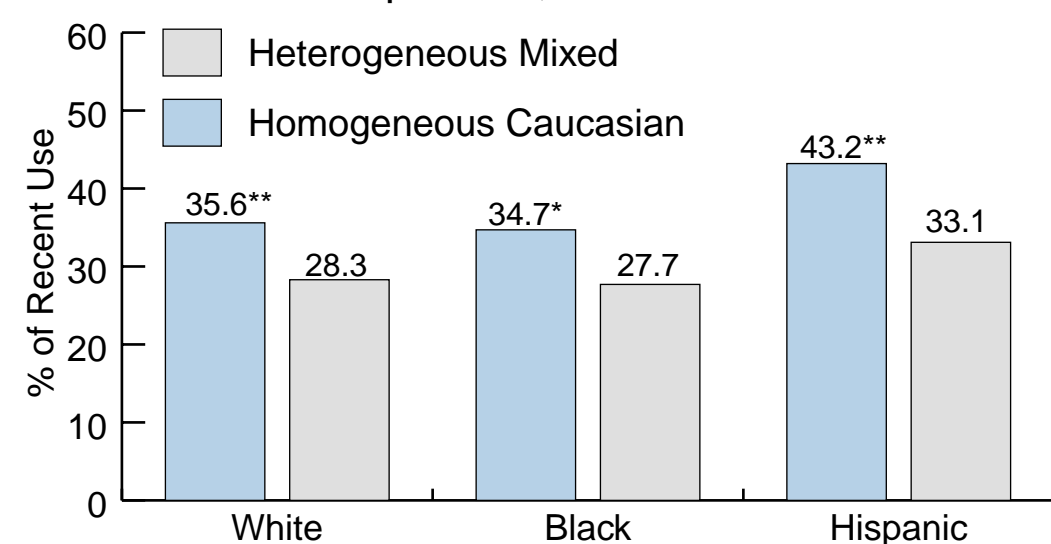


Figure 4: Recent Cigarette Use by Race and District Racial/Ethnic Composition, Grades 7-10

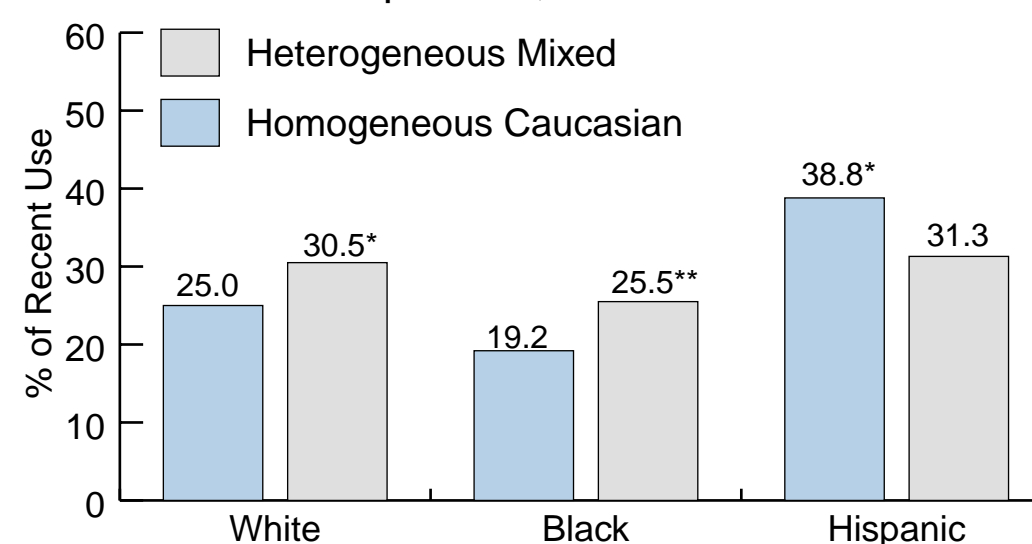


Figure 5: Recent Marijuana Use by Race and District Racial/Ethnic Composition, Gr. 7-10

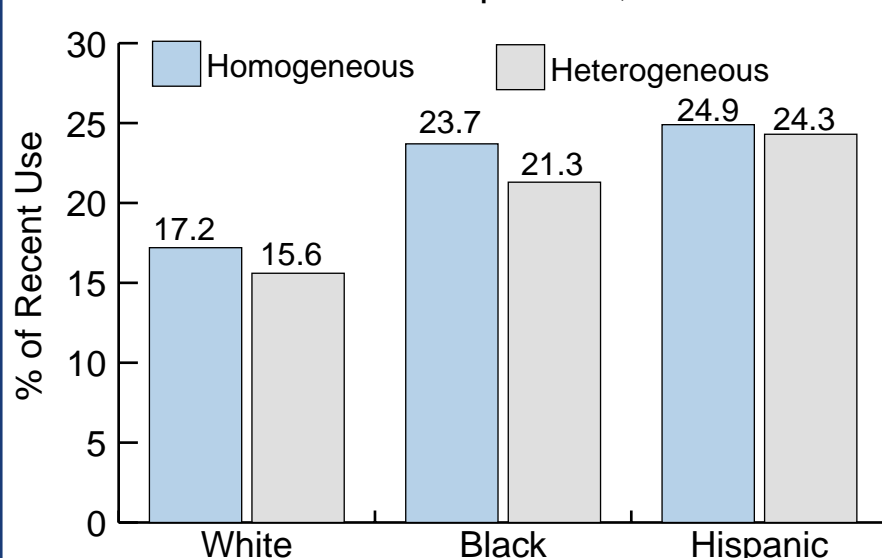


Figure 6: Recent Inhalant Use by Race and District Racial/Ethnic Composition, Gr. 7-10

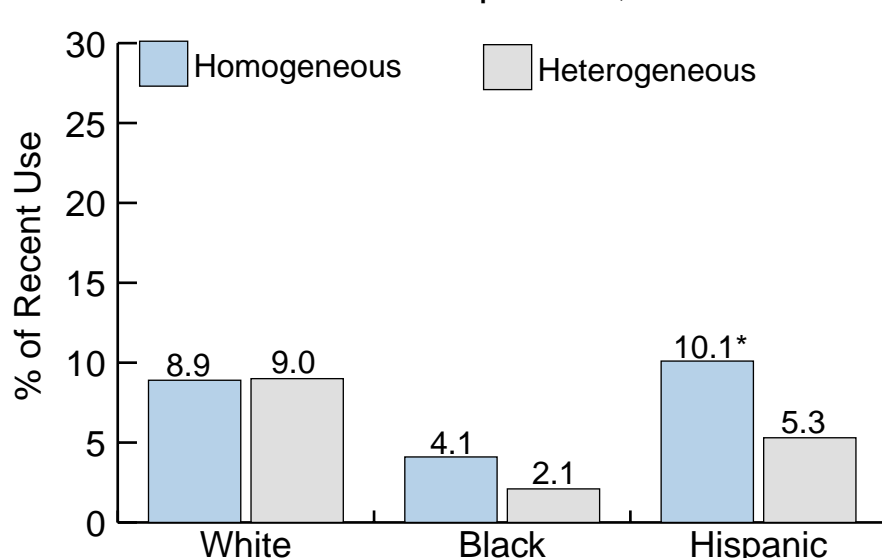
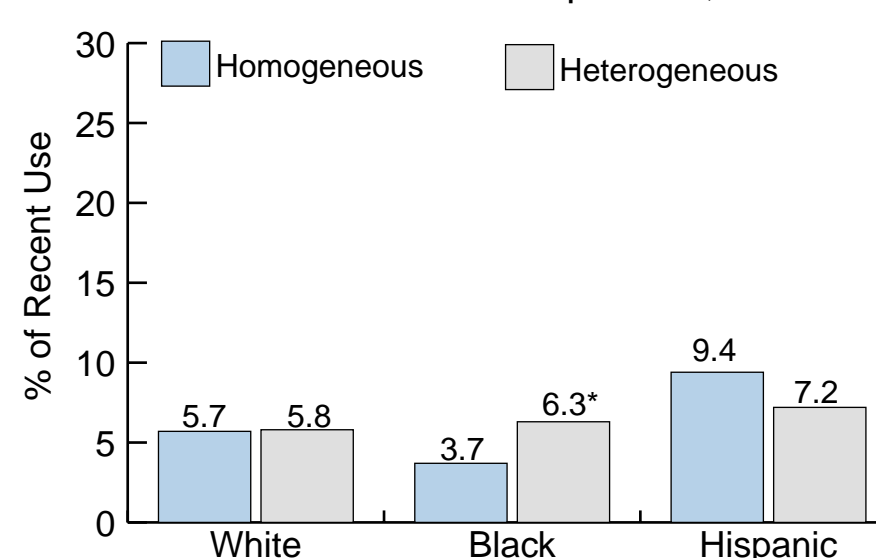


Figure 7: Recent Other Illicit Drug Use by Race and District Racial/Ethnic Composition, Gr. 7-10



* - p < .05, ** - p < .01; Other illicit drugs include cocaine, crack, heroin, hallucinogens, PCP, and ecstasy.

DISCUSSION

In this exploratory study, racial and ethnic differences in recent substance use among adolescents attending racially/ethnically homogeneous and heterogeneous school districts were examined.

Consistent with national trends,¹ the data show that African American substance use prevalence is lower than both white and Hispanic substance use. While national data has shown the prevalence of Hispanic substance use to be lower than that of whites, this study found that recent substance use is more prevalent among Hispanics in Connecticut. Given the large Puerto Rican constituency in the state⁸, the prevalence of substance use among the Hispanic population is not surprising. Studies have shown that the Mexican-American and Puerto Rican substance use levels mirror and often exceed those of whites.^{4,9} In light of the racial and ethnic differences in use, it is imperative that prevention and treatment programming be culturally appropriate.

The data showed that the level and type of substances used in different district types varied. Alcohol and inhalants were more common in homogeneous districts while cigarette use was more common in heterogeneous districts. These patterns were similar to those found in previous studies with the exception of licit drugs. Contrary to commonly held beliefs, data in this study show that there is no difference in marijuana and other illicit drug use by community type.³

The figures also suggest that when assessing risk for adolescent substance use or planning prevention activities in a particular community, it is important to consider the racial/ethnic composition of the area. Alcohol, the most commonly used substance, was more prevalent in homogeneous districts regardless of racial/ethnic group. This finding indicates that alcohol use is a more important issue for all students in predominantly Caucasian schools. Hispanics were more likely to be current smokers in homogeneous schools, while the reverse was true for whites and blacks. Prevention planning should be adapted to these different situations.

Peer influences and the larger school substance use climate appear to play an important role in adolescent substance use, particularly among Hispanics. The patterns of certain substances when both blacks and Hispanics were in homogeneous districts was similar to the patterns of whites. For example, consider inhalants, a substance more common in white populations and generally an issue for younger students. Twice as many black and Hispanic students used inhalants in the homogeneous white districts than in the heterogeneous mixed racial/ethnic districts.

Although this study has intriguing implications and raises more questions than it answers, it is only an initial foray into this area and not without some limitations.

The questionnaire used to collect racial/ethnic demographic information utilized closed-ended response categories that were designed to be consistent with state and federal guidelines. The response categories were broad in design and did not allow for the examination of subgroup differences. The second caveat involves the sample itself. Data were collected from youth in school settings and does not include truant and dropouts. Previous research has noted that dropouts have prevalence rates for all classes of drugs that are substantially higher than in-school students.¹⁰ Being cognizant of the effects of school dropouts on school based rates of use, the authors limited the analysis to students in the 7th-10th grades. Lastly, since the categorization of districts by racial/ethnic genera occurred along socioeconomic and suburban/urban lines, these data may be confounded with socioeconomic status, poverty, urbanicity, access to substances, and other correlates of substance use. Future studies might instead examine homo- and heterogeneity as percentage white or percentage minority to better control for these potential effects.

In conclusion, this study found that the prevalence of substance use among whites, blacks, and Hispanics differed by substance type and school district racial/ethnic genus. Pattern of use mirrored those of the dominant racial/ethnic group in the district and Hispanics appear to be strongly influenced by the behaviors of their white peers.

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