

# Ethnic Labels and Ethnic Identity as Predictors of Drug Use among Middle School Students in the Southwest

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**This article explores differences in the self-reported drug use and exposure to drugs of an ethnically diverse group of 408 seventh-grade students from a large city in the southwest. We contrast the explanatory power of ethnic labels (African American, non-Hispanic White, Mexican American, and mixed ethnicity) and two dimensions of ethnic identity in predicting drug use. One dimension focuses on perceived ethnically consistent behavior, speech, and looks, while the other gauges a sense of ethnic pride. Ethnic labels were found to be somewhat useful in identifying differences in drug use, but the two ethnic identity measures, by themselves, did not generally help to explain differences in drug use. In conjunction, however, ethnic labels and ethnic identity measures explained far more of the differences in drug use than either did alone. The findings indicate that the two dimensions of ethnic identity predict drug outcomes in opposite ways, and these relations are different for minority students and non-Hispanic White students. Generally, African American, Mexican American, and mixed-ethnicity students with a strong sense of ethnic pride reported less drug use and exposure, while ethnically proud White students reported more. Ethnic minority students who viewed their behavior, speech, and looks as consistent with their ethnic group reported more drug use and exposure, while their White counterparts reported less. These findings are discussed, and recommendations for future research are provided.**

Research has often posited a relation between ethnic identity and psychological and health outcomes, including drug use. While ethnicity is often included as a variable in studies on a wide range of topics, the nature of the relation between ethnicity and drug use remains elusive (Phinney, 1996). There is a continuing need to better understand and document the components of ethnicity, their impact on physical and psychological health, and the mechanisms by which they affect these outcomes (Phinney, 1996; Williams, Lavizzo-Mourey, & Warren, 1994).

Early adolescence has received increasing attention in the drug-use literature. Johnston, O'Malley, and Bachman (2000) show that lifetime self-reported illicit drug use for adolescents in eighth grade steadily rose in the 1990s from 18.7% in 1991 to a high of 31.2% in 1996, and only decreased slightly to 28.3% by 1999. Although these temporal trends are similar across adolescent age groups, the prevalence of illicit drug use differs markedly for younger and older adolescents. In 1999, eighth graders had much lower lifetime prevalence of illicit drug use (28.3%), compared with tenth graders (46.2%) and twelfth graders (54.7%; Johnston et al., 2000). Only 12.2% of students in eighth grade reported current use of illicit drugs, compared with 22.1% of tenth graders and 25.9% of twelfth graders. Clearly, early adolescents use drugs less frequently than older youth, but given the sharp increase in the early 1990s and the relatively stable rate of illicit drug use in the late 1990s, factors influencing drug use among young students have received growing attention.

The period of early adolescence is important for two reasons. First, adolescent drug use is often characterized as a progression from experimentation with easily accessible legal drugs, like tobacco or alcohol, to serious abuse of illicit drugs, such as marijuana and cocaine (Boyle et al., 1992; Duncan, Duncan, & Hops, 1998; Newcomb & Bentler, 1986a; Segal & Stewart, 1996). For example, cigarette use during early adolescence has been shown to be better than alcohol use in predicting late-adolescent marijuana and hard drug use (Newcomb & Bentler, 1986a), and later adult drug use (Boyle et al., 1992; Duncan et al., 1998). Most early adolescents who report drug use continue to use drugs in late adolescence (Boyle et al., 1992), and increases over time in their use of one drug can also increase the use of other drugs (Duncan, Duncan, Biglan, & Ary, 1998). Drug use in early adolescence has also been related to other problem behaviors such as high school drop-out rates (Hlickson, Bui, Bell, & McGuigan, 1998), and alcohol-related aggression and alcohol dependency (Windle, 1990). Understanding the etiology of drug use in early adolescence could greatly improve health outcomes in later years.

Second, early adolescence is also a period of emotional, physical, and social changes that may increase an individual's risk for exposure to or use

of alcohol, tobacco, and other drugs. The model of drug-use etiology developed by Catalano, Kosterman, Hawkins, Newcomb, and Abbott (1996) identifies four developmental periods of rapid change in the social environments of preschool, elementary school, middle school, and high school students. This model suggests that variables affecting drug-use behavior in one developmental period will also influence variables and behavior in the next developmental period. Bailey and Hubbard (1990) studied one of the most important developmental changes for preadolescents: the shift in influence from parents to peers. They found initiation into drug use is influenced primarily by parental attachment among sixth graders, and mostly by peer attachment among ninth graders, with a mixture of parent and peer attachment influencing students in intermediate grades. Adolescents find themselves with increasing amounts of unsupervised time and exposure to peers, factors that have been related to higher levels of drug use and delinquent behavior (Chilcoat & Anthony, 1996; Duncan, Duncan, Biglan, & Ary, 1998; Feiring & Lewis, 1993; Flannery, Williams, & Vazsonyi, 1999).

#### Ethnic Differences in Youth Drug Use

Research shows that early adolescents of different ethnic backgrounds hold different drug-related attitudes and behaviors (Hecht, Trost, Bator, & MacKinnon, 1997; Korzenny, McClure, & Rzyttki, 1990; Moon, Hecht, Jackson, & Spellers, 1999). A variety of factors related to self-reported drug use, resiliency, and risk among members of ethnic groups have been investigated. A relation has been found between ethnic differences and risk of using drugs other than alcohol (Bachman et al. 1991; Dryfoos, 1990; Kumpfer, 1989; Kumpfer & Turner, 1990-1991; Newcomb & Bentler, 1986b; Pentz, Trebow, & Hansen, 1990), the degree of health risk associated with drug use (Maddahian, Newcomb, & Bentler, 1985), and the types of drugs most commonly used (Kandel, 1995).

For example, White adolescents report the lowest levels of perceived amount of risk of drug use and friends' disapproval of drug use (Substance Abuse and Mental Health Services Administration, 1998; Wallace & Bachman, 1993). They also tend to be higher sensation seekers (Kaetner, Rosen, & Appel, 1977), are at greatest risk when they have lower levels of family pride and involvement (Vega, Zimmerman, Warheit, Apospori, & Gil, 1993; William & Smith, 1993), and have peer models for hard liquor use (Newcomb & Bentler, 1986b). African Americans report the highest levels of perceived risk and friends' disapproval of drug use (Wallace & Bachman, 1993), but also tend to have peer models for beer and wine use (Newcomb & Bentler, 1986b). Latino/a adolescents fall between Whites and African

Americans in degree of perceived risk of drug use and friends' disapproval of use (Wallace & Bachman, 1993), but also have more peer models for using pills like "uppers" (i.e., stimulants) than other ethnic groups (Newcomb & Bentler, 1986b).

The size of ethnic differences in adolescent drug use varies by substance and type of measure. The National Household Survey on Drug Abuse (Substance Abuse and Mental Health Services Administration, 1998) found few differences in illicit drug use in the past 30 months among White, Hispanic, and African American youth aged 12 to 17. However, the Youth Risk Behavior Survey (Centers for Disease Control and Prevention, 1998) found large differences in alcohol use, with 54% of White school-age youth, 73% of Black youth, and 83% of Hispanic youth using alcohol in the past 30 days. Current use of marijuana was about the same for all ethnic groups, but differences appear for current cocaine, "crack," or "freebase" use: 3% of Whites, less than 1% of African Americans, and 6% of Hispanics. The unique developmental characteristics of early adolescents add complexity to the understanding of ethnic differences in drug use. A pressing challenge for such inquiry is the fact that these youth are in the process of developing their own ethnic identity.

### Understanding Ethnic Identity

Phinney (1996, p. 145) suggests that ethnicity can be understood in three ways. The first is the cultural aspect of ethnicity or the "norms, values, attitudes, and behaviors that are typical of an ethnic group and that stem from a common culture of origin transmitted across generations." Within this cultural understanding of ethnicity, acculturation, or the degree to which an individual assumes the values, norms, and attitudes of the dominant culture, is often assessed. Acculturation is believed to affect behavior by introducing and reinforcing behaviors of the dominant culture that may be at odds with the culture of origin (Gilbert & Cervantes, 1986). Acculturation may also induce stress as the individual tries to resolve conflicting differences between two or more cultures. This may lead to attempts to reduce stress through a variety of destructive behaviors such as drug use (Beauvais, 1998). Basic measures of acculturation frequently include language usage (Maria, Sabogal, Marin, Otheo-Sabogal, & Perez-Stable, 1987) and place of birth (Amaro, Whitaker, Coffman, & Heeren, 1990). However, acculturation is not a one-way street. Students from one minority ethnic group may be acculturating into another minority ethnic group and not necessarily into mainstream culture, and the speed and direction of accul-

turation may vary greatly among ethnic minority youth (Marsiglia, 1998; Marsiglia & Holleran, 1999).

A second aspect of ethnicity is ethnic identity, which Phinney (1996, p. 146) defines as the "subjective sense of ethnic group membership." Like acculturation, ethnic identity has been assessed using a variety of measures. Several studies define identity as the degree to which the individual is knowledgeable of and participates in a particular culture and its traditions (Brook, Whiteman, Balka, Win, & Gursen, 1998; Cooney, Rogler, Hurrell, & Ortiz, 1982). Ethnic attachment has been proposed as the third dimension of identity (Phinney, 1992) and includes the subjective sense of belonging to one's ethnic group, one's attitudes toward the group, and labeling oneself as belonging to the group. McCreary, Stavin, and Berry (1996) conceptualize African American adolescent identity as recognition and pride in the socioracial aspects of the self and beliefs about the political/economic status of African Americans.

Brook et al. (1998) distinguish two additional components of ethnic identity: "ethnic identification," which denotes identification with friends of similar heritage, and "ethnic affiliation," the degree to which individuals of similar heritage are selected as friends. Herd and Grube (1996) propose a model of drinking behavior among African Americans that combines many of these conceptions of ethnic identity. The model draws on the anthropological literature and includes ancestral origin, common language, endogamy, and ethnic social networks.

### Ethnic Identity, Ethnic Labels, and Drug Use

The link between ethnic identity and drug use or other psychosocial outcomes of interest has been difficult to determine (Beauvais, 1998) and findings have been inconsistent. Bankston and Zhou (1997) studied ethnic identification and delinquency among Vietnamese youth and found that delinquent youth were more likely to associate with friends who were not Vietnamese. These delinquent youth tended to dislike aspects of Vietnamese culture and were not as well integrated into Vietnamese ethnic society as nondelinquent youth. In contrast neither ethnic identity nor acculturation was related to treatment motivation among a group of Mexican Americans arrested for drug use (Longshore, 1997, 1998). These apparent inconsistencies may be related to the effects of acculturation on ethnic identity.

Studies specific to drug abuse and ethnic identity have had similar inconsistencies. Overall low rates of problem drinking among Italians (Simboli, 1985) and Cubans (Page, Rio, Sweeny, & McKay, 1985) were found to be related to traditional cultural factors. Other studies found that the de-

gree of acculturation of young Hispanics as measured by language preference and place of birth was positively related to higher levels of marijuana and cocaine use (Amaro et al., 1990). Trimble (1996) and Bates, Beauvais, and Trimble (1997) found that peer influences accounted for most of Native Americans' involvement with alcohol, and that ethnic identity played a small and insignificant role.

Several researchers have found that the direct effects of ethnic identity on drug use behavior are equivocal, but their mediating effects on more proximal factors are significant. For example, Brook and colleagues (1998) studied drug use among Puerto Ricans and found that only two of five measures of ethnic identity-language preference and native/migrant status-were related to drug use. Similarly, Longshore (1997) found that ethnic identity, while it did not directly relate to treatment motivation, did increase motivation when combined with problem recognition. Herd and Grebe (1996) reported that ethnic identity, measured by media preferences, sociopolitical awareness, endogamy, and social networks, influenced drinking behavior among African Americans both directly and indirectly. Ethnic identity was found to mediate effects on drinking norms and religiosity that in turn influenced drinking behavior.

Beauvais (1998) identified three ways in which ethnicity and its relation to drug abuse has been researched: prevalence studies, studies of risk and protective factors, and studies on the role of cultural or ethnic identification in drug-use behavior. The first type examines rates and patterns of drug use among various ethnic groups. Participants are grouped into homogenous categories that are identified by labels such as "White" or "Hispanic," and trends in drug-abuse behavior are identified for each of these categories. The second type of study investigates how various determinants of drug abuse, known as risk and protective factors, are distributed among a population subgroup. These studies suggest that not only does drug use vary by ethnic group, but the causal, mediating, and inhibiting factors of drug use vary by ethnic group. In other words, different ethnic groups use drugs for different reasons. The third type of research attempts to describe how factors associated with the experience of one's ethnicity, such as individuals' identification with their ethnicity, might influence drug use.

Recent critiques of the first two types of studies have argued that they approach ethnicity in a "garbled" and "unsophisticated" way, using homogenous ethnic group labels as a crude proxy for the complex relation between ethnicity and drug use (Collins, 1995; Longshore, 1998; Trimble, 1995). Williams et al. (1994) question the utility of racial taxonomies for understanding behavior substantively. Such categories were built on an outdated racial paradigm, assuming that people with different skin color were biologically or genetically different and therefore could be expected

to behave differently. These biological conceptualizations are without scientific basis (Gould, 1996; Montagu, 1997) and have limited predictive power as determinants of health (Gold, Thomas, & Davis, 1987), with more differences appearing within groups than between groups (Zuckerman, 1990). Based on their results, the authors of these studies suggest that these categories more accurately reflect social, economical, historical, and cultural factors than biological or genetic differences among groups.

Currently there is a broader acceptance of the ethnicity paradigm, recognizing the importance of culture over phenotypical (racial) differences (Wallace, Bachman, O'Malley, & Johnson, 1995). However, the tendency to overgeneralize persists. "Ethnic glosses" (Collins, 1995; Trimble, 1991, 1995), or conceptualizations of ethnicity as homogenous categories, are problematic for several reasons. One-dimensional ethnic labels may obfuscate the differences within groups and create overinclusive categories that are meaningless in understanding behavior (Beauvais, 1998; Cheung, 1993; Longshore, 1998). Phinney (1996) cites a variety of authors such as Jones (1991), Reid (1994), and Zuckerman (1990) who have found that the variation within ethnic groups on such factors as education, family structure, and social class makes predicting behaviors by ethnic group membership alone untenable. Ethnic labels may also obscure variables, such as socioeconomic status (SES), that have a more potent effect on behavior (Cheung, 1990-1991). Williams et al. (1994) suggest that variations in health status among ethnic groups is a result of differential exposure and vulnerability to behavioral, psychological, social, material, and environmental risk factors and resources rather than some intrinsic ethnic characteristic. Ethnicity impacts health status through intermediaries such as environmental risk factors, community violence, and exposure to toxins that affect well-being more directly. Failure to identify these proximal factors can reinforce ethnic prejudices and perpetuate racist stereotypes.

Research is inconclusive about the sequence of factors impacting drug use among majority and minority youth. For example, the empirical support for self-esteem as a determinant of drug use is mixed. A review of the issue by Schroeder, Laflin, and Weis (1993) is inconclusive, pointing to problems in measuring self-esteem and drug use constructs, confounding variables, and inappropriate causal inferences. Some studies have failed to find a correlation between self-esteem and drug use (Felix-Ortiz & Newcomb, 1992; Laflin, Moore-Hirschl, Weis, & Hayes, 1994; Moore, Laflin, & Weis, 1996), but others have identified an overall relationship (Howard, Walker, Walker, Cottler, & Compton, 1999; McCreary, Slavin, and Berry, 1996; Resnicow, Soler, Braithwaite, Selassie, & Smith, 1999) or a relation in a subgroup of a study sample such as Hispanics (Vega et al., 1993).

Research suggests that ethnic identity is crucial to an individual's self-

concept and that the stronger one's ethnic identity is, the greater the contribution it will make to one's self-concept (Phinney, 1990, 1996). Studies relating ethnic identification to self-esteem have had mixed results, and in those instances in which positive relations have been found, the causal direction remains unclear (Phinney, 1991). Self-esteem has been related to different developmental stages of ethnic identity (Phinney, 1989; Phinney & Alipuria, 1990); that is, higher self-esteem is related to higher levels of ethnic identity. Parham and Helms (1985) showed that low self-esteem was related to the earliest stage of ethnic identity, whereas high self-esteem was associated with stages that involve a search or immersion in the ethnic culture. Some research indicates that ethnic identity is positively related with self-esteem and satisfaction with interethnic communication for African Americans, but inversely related to both of these among Whites (Larkey & Hecht, 1995; White & Burke, 1987). Similarly, other research found that self-esteem was positively related to immersion and internalization attitudes and negatively related to pre-encounter attitudes. In other words, as youth begin to develop a stronger ethnic identity, their self-esteem is strengthened (Speight, Vera, & Derrickson, 1996).

Self-esteem has also been raised as a factor in the role that ethnic identity plays in drug use (McCreary et al., 1996; Phinney, 1991). It is difficult to speak of a cause-effect relation between these two constructs. It is possible that a more defined ethnic identity strengthens one's self-esteem. Samples tend to overrepresent majority culture or use minority subsamples drawn from environments where ethnic minority students are assimilated or have reacted to assimilation pressures in different ways. In either case, it appears that self-esteem may relate to ethnic identity and drug use in different ways for youth in majority and ethnic minority cultures.

Clearly, no one conceptualization of ethnic identity has achieved prominence and the difficulty in defining, understanding, and measuring ethnic identity has been noted (Beauvais, 1998). There is increasing recognition that ethnic identity is a multidimensional construct that needs to be measured with multiple cultural indicators (Beauvais, 1998; Brook et al., 1998; Cheung, 1993; Trimble, 1995). The present inquiry investigated these various potential facets of ethnic identity, including self-esteem, and relied on an empirical examination of how they cohere in a sample of ethnically diverse seventh graders residing in the southwestern United States. Due to unique sociopolitical conditions of the border region, such as its proximity and porous relationship to Mexico, we believed that early adolescents' ethnicity and ethnic identity may be linked to their levels of drug use in ways that are unique to the setting and the ethnic group. In addition, we wanted to explore these issues because our sample involved mostly ethnic minority students attending schools located in the poorest neighborhoods

of the city where they are the numerical "majority" and where their White classmates are the numerical "minority." Our main research question was: Are there differences in self-reported drug use among early adolescents of different ethnic backgrounds in the urban southwestern United States? It was hypothesized that both ethnic labels and ethnic identity, separately and in combination, would predict differences in self-reported drug use and exposure to drugs.

## METHOD

Data for the study were gathered from 451 seventh graders, who composed a middle school subsample of a survey conducted in the three poorest school districts of a southwestern city during the spring of 1996. The survey was administered in randomly selected schools and classrooms within these districts. One English or English as a Second Language (ESL) class was chosen at each of 15 randomly selected middle schools. Students were told that this was a university research project and guaranteed confidentiality. All students present the day of survey administration agreed to complete the questionnaire. Students absent from class on the day of the survey administration were not contacted. The average age of the students was 12.7 and 87% were 12 or 13, with relatively equal numbers of females (51%) and males (49%). When self-identifying with an ethnic label, the largest ethnic group in the sample was Mexican Americans (52%), followed by non-Hispanic Whites (23%), those of mixed ethnicity (14%), and African Americans (12%). Due to insufficient numbers, we excluded from the sample and from all results those who self-identified as Native American ( $n = 19$ ), Chinese American ( $n = 14$ ), or Japanese American ( $n = 10$ ). After these exclusions, the sample totaled 408 participants.

University-trained survey proctors administered the 45-min questionnaire, available in both English and Spanish. The questionnaire was divided into different sections (see below) consisting of a demographic section and a series of Likert-type and dichotomous subscales aimed at capturing students' self-identities and their experiences with alcohol, tobacco, and other drugs.

### Ethnic Labels and Ethnic Identity

First, a checklist was used to determine the ethnic group to which respondents believed they belonged (ethnic label). Possible responses for eth-

nicity were Chinese/Chinese American, Japanese /Japanese American, Black/African American, Mexican American/ Hispanic/ Chicano/ Latino, White /Anglo-American, Native American /American Indian, Mixed Heritage, and Other.

Second, students indicated aspects of ethnic identity by responding to a series of 20 statements (see the Appendix) regarding how "connected" they felt to the ethnic group they had just selected, using a 4-point Likert scale (strongly agree = 3, agree = 2, disagree = 1, strongly disagree = 0). The ethnic-identity items were developed in a pilot study on this population to capture different dimensions of ethnic identity. A maximum likelihood orthogonal factor analysis of these items identified two distinct dimensions of ethnic identity, each composed of variables with factor loadings from .43 to .77. The first pattern tapped ethnic behavior, speech, and looks. The eight questions most strongly associated with this factor cohered strongly, with a Cronbach's  $\alpha$  reliability coefficient of .82. The component items addressed the degree to which students felt their behaviors, speech, and looks were consistent with those of others from their ethnic group, and the degree to which their friends came from the same group. Thus, this factor combined aspects of what others have referred to as ethnic affiliation and ethnic attachment. Another set of seven questions centered around ethnic pride, Cronbach's  $\alpha$  = .76, with students indicating the degree to which (1) they thought about what it means to be from their ethnic group, (2) their ethnic group was important to them, (3) they knew the history of their group, (4) they talked to other group members to learn more about their ethnic group, (5) they thought that members of their group looked better than others; (6) they felt good about being a member of the group, and (7) they would choose to be a member of the group if given a choice. A less-coherent third pattern, inversely correlated with the first two, formed around five questions that measured negative perceptions about the students' own ethnic group, with students indicating the degree to which (1) their ethnic group did not mean much to them, (2) they wished they were not from that group, (3) they wished they looked like they were from another group, (4) they felt people from this group did not "know how to act," and (5) they felt that people from this group talked in embarrassing ways. In the analyses, we used (lie standardized factor scores from the first two patterns of ethnic identity-ethnic behavior/speech/looks and ethnic pride. In preliminary examinations, the factor tapping negative sentiment about one's ethnic group was not clearly related to drug use, perhaps because it was less coherent than the first two factors; therefore it was not included in the analyses.

## Drug-Use Measures

*Drug Use in the Last Month.* A set of dependent variables was constructed from questions about the frequency of recent drug use, modeled after questionnaire items used by Flannery, Vazsonyi, Torquati, and Fridrich (1994). This measure was chosen due to its developmental specificity for the age group being studied. In addition, this measure is similar to scales used in other large studies of early adolescent drug use (e.g., Kandel, 1995; Newcomb & Bentler, 1986a). Students were asked to indicate how often in the past month they had done each of the following: smoked cigarettes or used any tobacco product; drunk alcohol; used uppers; smoked marijuana; or used "hard" drugs such as hallucinogens, cocaine, crack, heroin, depressants. We transformed the categories of the original responses into estimates of the number of days they had used each substance in the past month. Participants indicated if they had used the drug 1 to 2 days (coded 1.5), 3 to 7 days (coded 5), 8 to 14 days (coded 11), 15 or more days (coded 20), or not at all (coded 0). Preliminary analysis revealed that few students used uppers so the results presented focus solely on use of alcohol, tobacco, marijuana, and hard drugs.

*Lifetime Drug Offers and Drug Use.* Students also were asked how many of seven different drugs they had ever been offered in their lifetimes, and how many of these they had ever used at least once. The substances were cigarettes/ tobacco, beer/wine, hard liquor, marijuana, hard drugs (cocaine, crack, LSD, heroin), uppers (speed, methamphetamine), and inhalants (gas, spray, glue). Responses to these items were combined into two indexes, one measuring the number of different drugs they had ever been offered, the other measuring the number of these drugs they had used in their lifetime.

*Age of Initial Drug Use.* Information from four questions was combined to identify the earliest age which students began using alcohol, cigarettes, marijuana, or hard drugs. Our analyses of this outcome are restricted to students who indicated they had used at least one of these four substances.

## Control Variables

In nullivariate analysis three variables were introduced as controls: gender, age, and self-esteem. Males and older students are generally at higher risk for using drugs. Current age in years was calculated from the stu-

dent's birth date, which they recorded on the questionnaire along with their gender (male/female). While its role in the etiology of drug use remains contested and unclear empirically, we opted for the conservative strategy of including self-esteem as a control variable, because self-esteem and ethnic identity may be more closely intertwined among adolescents from ethnic minorities than those in the majority culture (Larkey & Hecht, 1995; McCreary et al., 1996; Phinney, 1991; White & Burke, 1987). Additionally, we wanted to allow for the possibility that these dynamics may differ for ethnic minorities in neighborhood and school settings where they constitute a numerical majority, as in this study's sample.

Five items from Rosenberg's (1965) self-esteem scale were used to measure respondents' level of self-esteem. For each item, respondents indicated on a 5-point Likert scale (strongly disagree = 0, disagree = 1, neutral = 2, agree = 3, strongly agree = 4) the degree to which they felt they had a number of good qualities, did not have much to be proud of, took a positive attitude toward themselves, were satisfied with themselves, and at times thought they were no good at all. Before calculating the mean of the five items, the coding of the two negatively phrased items was inverted, so that higher scores on the scale indicated higher self-esteem. All five of the component self-esteem items cohered well, both in tests of reliability, Cronbach's  $\alpha = .68$ , and in a confirmatory factor analysis that produced a single strong factor. The self-esteem scale was not correlated with the ethnic pride standardized factor score for the sample as a whole,  $r(406) = .02$ , but the relation was modestly positive for mixed ethnicity,  $r(54) = .21$ , and White,  $r(90) = .20$ , students, and slightly inverse for African American,  $r(47) = -.13$ , and Mexican American,  $r(209) = -.07$ , students. Self-esteem was more strongly and consistently related to ethnic behavior/speech/looks, with a correlation of .22 overall, and a much stronger relation among mixed-ethnicity students,  $r(54) = .42$ , than White,  $r(90) = .24$ , Mexican American,  $r(209) = .19$ , or African American,  $r(47) = .18$ , students.

Our multivariate examinations of drug-use patterns did not attempt to control for SES, because of homogeneity in the sample and concerns about the reliability of students' reports about family SES. The survey was administered in central city public-school districts with high proportions of students from lower-income homes. A vast majority of the students enrolled in the participating schools (8570-9570) qualified for reduced- or free-lunch programs, but due to confidentiality issues, schools were not able to provide lunch program-participation information about specific students. We judged any attempts to further distinguish the lowest SES students from self-reports about their parents' incomes and/or occupations to be subject to unacceptably high unreliability, particularly given their young ages.

Our analysis strategy involved comparisons of drug use and exposure for students of different ethnic backgrounds, and for those who identified strongly versus weakly with their self-identified ethnic group. We first gauged the presence and size of differences in drug exposure and use by ethnic group and ethnic identity using *t* tests. We then used multivariate ordinary least squares (OLS) stepwise regression to explore the role of ethnic labels and strength of ethnic identity in predicting these outcomes. The regressions indicated whether ethnic labels or ethnic identity superseded the other as predictor, whether they operated together in additive or interactive fashion, and whether their effects persisted after controlling for differences in the frequency of drug use for students of different age, gender, and level of self-esteem. Diagnostic statistics indicated that the regression equations were robust and free of bias due to outliers or multicollinearity. In initial tabular presentations of results using *t* tests, both the ethnic behavior/speech/looks and the ethnic pride standardized factor scores dichotomized at their means for the sample overall; but in multivariate regressions, the full range of values for the standardized factor scores was employed.

## RESULTS

Table 1 presents means and standard deviations for variables used in the analysis, and correlations with dependent variables. There were a few small correlations between drug use and the predictor variables. Males used tobacco more often, used more types of drugs, and began using them at an earlier age than females. Older students had been offered, and had used, more types of drugs. Self-esteem was inversely correlated with the number of types of drugs ever offered to and used by the respondents. The correlations with the dichotomous ethnic variables showed a tendency for African Americans to have used hard drugs more frequently than others, for Mexican Americans to have been offered and to have used more types of drugs, for mixed-ethnicity students to have begun drug use earlier than others, and for non-Hispanic Whites to have used the fewest types of drugs. Of the two ethnic identity factors, only the one centering on ethnic behavior/speech/looks was significantly correlated with drug exposure. Those identifying more strongly with their group's way of acting, speaking, and dressing tended to have been offered more types of drugs and to have begun drug use at earlier ages.

More substantial relations were found among the various drug outcomes. Alcohol was the drug used most frequently (3.65 days per month), followed closely by tobacco (3.3 days per month). Although less common, marijuana was used, on average, approximately two days per month.



TABLE 2  
Means and *t* Tests of Drug-Use Frequency in Last Month', Number of Drugs Offered and Used, and Age at First Drug Use, by Ethnic Label and Ethnic Identity

	<i>Alcohol Last Month</i>	<i>Tobacco Last Month</i>	<i>Marijuana Last Month</i>	<i>Hard Drugs Last Month</i>	<i>Frequency Last Month, Four Drugs</i>	<i>No. of Drugs Offered</i>	<i>No. of Drugs Used</i>	<i>Age First Used Drugs</i>
<b>African American</b>								
Weak ethnic behavior/speech/looks	2.83*	1.87	1.60	.48*	1.40*	1.77	1.38	10.62
Strong ethnic behavior/ speech/ looks	4.41	6.96	4.52	3.54	4.41	2.52	1.87	9.36
Weak ethnic pride	6.12	5.65	5.96	4.15*	4.78*	2.85	2.31	9.19
Strong ethnic pride	2.65	3.75	1.89	1.11	2.10	1.86	1.36	10.13
<b>Mexican American</b>								
Weak ethnic behavior/speech / looks	3.98	3.84	1.54	.26	2.03	2.43	1.83*	9.88
Strong ethnic behavior/speech/looks	4.48	2.96	2.40	.70	2.22	2.77	2.23	9.66
Weak ethnic pride	4.61	3.00	2.53	.59	2.21	2.70	1.99	9.64
Strong ethnic pride	3.95	3.66	1.56	.43	2.07	2.55	2.12	9.85
<b>Mixed-Ethnicity</b>								
Weak ethnic behavior/ speech / looks	1.88	1.87	1.82	.05	1.13	1.90	1.47	9.35
Strong ethnic behavior/speech/looks	4.77	4.28	1.92	1.02	2.52	2.54	1.81	9.26
Weak ethnic pride	4.04	4.05	2.44	.24	2.14	2.53	1.79	9.08
Strong ethnic pride	1.95	1.34	.98	.91	1.22	1.68	1.36	9.68
<b>Non-Hispanic White</b>								
Weak ethnic behavior/speech/looks	3.41	3.66	1.42	.61	1.90	2.16	1.41	9.84
Strong ethnic behavior/speech/looks	1.49	1.66	.88	.54	1.01	1.85	1.29	9.20
Weak ethnic pride	1.23*	1.26*	.26*	.01*	.56**	1.92	1.41	9.66
Strong ethnic pride	4.06	4.49	2.23	1.19	2.58	2.14	1.3	9.36

*Note.* Hard drugs category includes hallucinogens, cocaine, crack, heroin, and depressants. Four drugs category includes alcohol, cigarettes, marijuana, and hard drugs.

Significant differences within ethnic/racial group between those low versus high on ethnic identity factor score: \**p* < .05; \*\**p* < .01. 'Estimated no. of days.

TABLE 3  
Ordinary Least Squares Regression Predicting Number of Days in Last Month Respondents Used Selected Drugs

	<i>Alcohol</i>			<i>Tobacco</i>			<i>Marijuana</i>			<i>Hard Drugs</i>		
	<i>b'</i>	<i>b</i>	<i>b</i>	<i>b</i>	<i>b</i>	<i>b</i>	<i>b</i>	<i>b</i>	<i>b</i>	<i>b</i>	<i>b</i>	
Gender (M = 1; F = 0)	.601	.531	.636	1.445*	1.457*	1.613'	.622	.602	.705	.344	.302	.345
Age	-.344	-.333	-.352	.048	.065	.077	.259	.277	.259	.050	.069	.038
Self-esteem	-.603	-.531	-.503	-.069	-.799'	-.801'	-.649'	-.608	-.668'	-.219	-.222	-.259
African American	1.105	1.265	1.359	1.455	1.235	1.290	1.770'	1.864'	2.339*	1.373*	1.369*	1.777-
Mexican American	1.648*	1.665'	1.495'	.439	.326	.250	.725	.709	.526	-.115	-.166	-.193
Mixed ethnicity	.694	.655	.162	.050	.083	-.196	.628	.600	.501	-.100	-.112	.129
Ethnic behavior/speech/looks		.239	-.809		.105	-.507		.253	-.188		.225	-.362
Ethnic pride		-.353	1.511*		.431	1.707*		-.222	1.191*		-.027	.565'
African American x Ethnic Behavior			1.385			1.999'			.256			.660
Mexican American x Ethnic Behavior			.986			.050			.392			.655
Mixed Ethnic x Ethnic Behavior			1.676			1.461			1.229			1.246*
African American x Ethnic Pride			-2.705*			-1.765			-3.457***			-1.878***
Mexican American x Ethnic Pride			-2.160*			-1.579'			-1.483*			-.631
Mixed Ethnic x Ethnic Pride			-3.203**			-2.075'			-1.304			.203
Intercept	8.421	8.064	8.355	3.577	3.739	3.664	-4.78	-.801	-.261	.434	.253	.751
Ar	.393	.393	.393	.393	.393	.393	.394	.394	.394	.393	.393	.393
R'	.017	.021	.053	.022	.026	.051	.022	.026	.069	.025	.029	.071

*Note.* Hard drugs category includes hallucinogens, cocaine, crack, heroin, and depressants.

' Unstandardized regression coefficient.

\**p* < .05; \*\**p* < .01; -*p* < .001; '*p* < .10.

the ethnic identity factors. These equations formed a consistent and theoretically interpretable pattern.

The first set of regressions for each substance indicated that males used tobacco significantly more frequently than females, and that those with higher self-esteem reported less frequent use of marijuana. There were also some selective effects of ethnic labels. Compared with non-Hispanic Whites, Mexican Americans reported more frequent use of alcohol, and African Americans reported more frequent use of marijuana and hard drugs.

When the two factor scores measuring strength of ethnic identity were added to the models there were two notable consistencies in the findings. First, ethnic identity by itself was not a significant predictor of frequency of drug use, controlling for the effects of ethnic labels. Second, controlling for ethnic identity did not markedly reduce the size or vitiate the statistical significance of the effects of ethnic labels.

In the last of the triad of equations for each substance, the interactive effects of ethnic labels and ethnic identity showed differences in the predicted frequency of self-reported drug use for those with differing degrees of ethnic identity within the same ethnic group. African American students expressing the strongest sense of ethnically consistent behavior, speech, and looks reported more frequent tobacco use than their African American counterparts who did not identify as strongly with their ethnic group. Similarly, mixed-ethnicity students with a stronger sense of ethnically consistent behavior, speech, and looks reported more use of hard drugs than their counterparts who described themselves with the same ethnic label but did not identify as strongly with it. The direction of these differences was reversed when examining the effects of ethnic pride on minority students' frequency of self-reported drug use. Compared with their counterparts with less ethnic pride, ethnically proud African American, Mexican American, and mixed-ethnicity students reported significantly less frequent use of alcohol, and the latter two groups reported less use of tobacco. The interaction effects indicated that for African Americans ethnic pride was a pronounced and statistically significant predictor of less frequent use of marijuana and hard drugs; a more modest significant effect in the same direction was seen for the interaction of Mexican Americans' ethnic pride and use of marijuana.

Another consistency across substances was that, when interaction effects were entered into the last set of equations, the coefficients for the main effects of ethnic pride reversed direction and became significantly positive. Because the interaction effects gauged the impact of ethnic identity for all the minority students, the main effects of the two ethnic identity factor scores can be interpreted as gauging the effects of ethnic identity specifically for White students. Again, they revealed a pattern (see Table 2):

White students with higher ethnic pride used drugs significantly more frequently than White students with less ethnic pride.

Lastly, it is noteworthy that the regression models that included the interaction effects more than doubled the explained variance of the previous models. The ethnic identity factor scores alone added little to the explanatory power of these models. They had appreciable predictive power only in combination with specific ethnic group labels. This finding suggests that the impact of ethnic identity on drug use differs in important ways across ethnic groups.

Table 4 presents an array of summary measures of drug use and exposure: monthly frequency of drug use, averaged across all four substances (alcohol, tobacco, marijuana, and hard drugs); the lifetime number of different drugs the students had ever been offered, and had ever used; and, for users, the age at which they had first begun to use any of the four substances. The findings echo those shown in Table 3, but with more explained variance, perhaps because the summary measures had more variance than previous items that measured the relatively infrequent use of some individual substances. The control variables showed that males, older students, and those with low self-esteem were at greater risk of drug use. Compared with females, males had used a greater variety of drugs, used them more frequently in the last month, and had begun to use them at an earlier age. Older students had been offered more drugs and had used more types of drugs. Students with high self-esteem had been offered and had used fewer types of drugs, and had used them less frequently in the last month.

The main effects of ethnic labels indicate that African American and Mexican American students tended to use a variety of drugs more frequently in the last month than non-Hispanic White students. Mexican American students also stood out as being exposed in their lifetimes to more types of drugs, both in terms of drug offers and drugs used. The two measures of ethnic identity played different roles in drug use and exposure when they were added to the models. Those with more ethnically consistent behavior, speech, and looks had been offered more types of drugs and had begun to use them at earlier ages. All of the coefficients for ethnic pride were nonsignificant when they were first entered into the equations, but one of these effects changed direction and became significant when the interaction terms were included in the model. This effect indicated that ethnically proud White students used drugs more frequently than White students with less ethnic pride. The interaction effects suggest again a possible protective role of ethnic pride for minority students, but not for White students. Ethnically proud African Americans reported using the different drugs less frequently, fewer drug offers,



found between minority and majority respondents with weak versus strong levels of ethnically consistent behavior and ethnic pride.

The findings suggest that a strong sense of ethnic pride is a protective or resiliency factor against drug use for lower-income minority students, but is associated with increased risk of use among lower-income White students. Ethnic minority students with stronger ethnic pride reported less frequent drug use and drug exposure than those with a weaker sense of pride in their ethnic group. These differences may indicate that notions of "ethnic pride" have a special resonance within the experiences of minority students, particularly African American students, for whom the inverse relationship between ethnic pride and drug use was strongest. Minority students are often exposed to stereotypes about their communities and their drug-use behaviors. It is perhaps those stereotypes that nonusers are rejecting while embracing a strongly positive identification with their ethnic group, as expressed through the ethnic pride measure.

In contrast, minority students who viewed their behavior, speech, and looks as consistent with their ethnic group used more types of drugs, more frequently, and at younger ages. Such outward consistency with one's ethnic group may be an indirect indicator of strong peer pressures toward conformity and desire for group affiliation among early adolescents, both of which may increase risk of drug use. Another possibility is that the results reflect internalized prejudice, whereby some minority students act on the negative messages they receive from majority culture. In either case, it is important to note that the ethnic minority students in this study were mostly Mexican American followed by a relatively small number of African American and mixed-ethnicity adolescents.

It is important to remember that Mexican American youth constitute the numerical majority in the schools and neighborhoods for this sample. However, in reporting patterns in our findings, we included them as "ethnic-minority students to highlight contrasts with non-Hispanic White Students. The relatively sizable group of mixed-ethnicity students also raises questions about the use and the interpretation of such a "mixed-ethnicity" label in a southwestern environment. Latinas/os or Hispanics are, by definition, a multiethnic group. Given what we know about the ethnic composition of the schools and classrooms in our sample, we strongly suspect that many of the mixed-ethnicity students were in fact Mexican or Mexican American students, rather than more conventionally defined mixed-race individuals (e.g., African American father and White mother). The terms *niestizo* or *la raza* are commonly used by those of Mexican ancestry to identify themselves as an amalgamation of their Spanish and Amerindian roots (Schaefer, 2000). The possibility that many Mexican or Mexican American students did not choose these labels raises in-

teresting ethnic-identity formation issues that need to be addressed by future research.

At first, the fact that the effects of ethnic identity were reversed for non-Hispanic White students seems paradoxical. Why would White students report more drug use and exposure when they express a stronger sense of ethnic pride, but also when they view their own behavior, speech and looks as less consistent with that of other White students? One possibility is that, in different ways, both groups of White students are alienated. Those who view their outward manner as atypical of other Whites may be experiencing estrangement from peers and lack a sense of social integration. Those emphasizing "White pride" may be made more aware of a sense of difference both by their lower SES compared with the White middle class and their position as a numerical minority in their neighborhoods and schools. White students in our lower-income sample may confound ideas of ethnicity with notions of social class when describing their own identities. Without a simple barrier of ethnicity and language difference to distinguish their socioeconomic position in predominantly Hispanic communities, these White students' positive ethnic identification may be with a reference group of more affluent Whites.

Our results leave some important questions regarding the etiology of adolescent drug use unanswered; for example, whether the precise causal role of self-esteem is as a mediating or direct factor in ethnic identity and drug use, a role that may differ by ethnicity. Our findings, however, suggest that ethnic identity measures need to be multidimensional in order to understand how adolescents of different backgrounds express a sense of identification with their community of origin from their own sociocultural perspective. A strong sense of ethnic identity may mean very different things and have quite different implications for drug use among minority and majority students, and among those living in different regions of the country. Using ethnic labels with caution, and developing different ethnic identity measures that capture the strength of ethnic identity among minority and majority students appear to be two fruitful approaches to follow in future research efforts aimed at gaining a better understanding of the differences in adolescent drug use between and within ethnic groups.

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## APPENDIX

## List of Component Items by Ethnic Identity Factors

Response categories for all items: 0 = strongly disagree, 1 = disagree, 2 = agree, 3 = strongly agree.

## Factor A. Ethnic behavior, speech, and looks

- I usually talk like other people who are my age from my ethnic group.
- I can talk the way most people from my ethnic group talk with no problem.
- I really like the way people from my ethnic group talk.
- I think I look like people my own age from my ethnic group.
- Most of my friends are from my ethnic group.
- I usually do what people my age from my ethnic group do.
- I prefer to do things that people from my ethnic group do.
- I prefer to act like people my own age from my ethnic group.

## Factor B. Ethnic pride

- I think or have thought a lot about what it means to be from my ethnic group.
- Being from my ethnic group is important to who I am.
- I often talk to people to learn more about my ethnic group.
- I know the history of my ethnic group.
- If I could choose, I would still be from my ethnic group.
- I feel good about being from my ethnic group.
- I think people from my ethnic group look better than people from other groups.

## Factor C. Ethnic negativity

- Sometimes I wish that I looked like somebody from another ethnic group.
- Being from my ethnic group does not mean much to me.
- Sometimes I wish I was not from my ethnic group.
- People from my ethnic group do not know how to act.
- Sometimes I am embarrassed by the way people from my ethnic group talk.

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