Chapter 15
Substance Abuse in Minority Populations

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Introduction

The United States has one of the highest levels of combined licit and illicit substance abuse compared to Western European, Latin American, and Asian nations, and addiction makes a major contribution to the national burden of disease (WHO World Mental Health Survey Consortium, 2004). Alcohol and tobacco use contribute an even higher burden of morbidity and mortality than do illicit drugs in the United States and throughout the world (Rehm, Taylor, & Room, 2006). Therefore the total substance abuse impact on American society is staggering in terms of both financial and human cost because it affects all sectors of the population (McGinnis & Foege, 1999; Rice, Kelman, & Miller, 1991). Moreover, drug problems are frequently accompanied by myriad co-occurring medical conditions and mental health problems (Merikangas et al., 1998). A very strong case can be made that substance use constitutes the most serious health problem facing American society and that it is largely a preventable problem (Erickson, 2001; Mokdad, Marks, Stroup, & Gerberding, 2004).

The use of substances is a culturally influenced behavior; therefore, the likelihood of drug use by individuals is governed in part by access to drugs and by societal and subcultural definitions about the types of substances that are tolerated (e.g. tobacco vs. cocaine), who can use them (e.g. sex, age groups, social position), the circumstances under which their use is accepted (e.g. work, recreation, public vs. private settings), and by whom (e.g. society, family, friends, peers, strangers) (Oetting, 1993; Vega & Gil, 1998). We would expect, and we find, great variability in rates and patterns of substance use, ranging from intolerance to conditional tolerance, across societies and among the subcultures that comprise them.

Ethnic minority populations are not inherently at greater risk of using substances in the United States, or elsewhere, due solely to their social status. There are compelling reasons why ethnic minorities could be *less* likely to abuse substances,

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including adherence to traditional-religious values and mores that are intolerant of intoxication, restrictive gender roles that proscribe substance use by women, perceived vulnerability to criminal sanctions, fear of negative health effects and social ostracism, and prohibitive cost. U.S. minorities reflect these patterns in varying degrees. There are also social factors that influence drug experimentation and addiction. Minorities in the United States are disproportionately residentially segregated and of lower social position. They are often stereotyped and discriminated against, experience frustrated mobility expectations, and reside in areas where access to both legal and illegal drugs is ample and marketing of these substances highly profitable. Drug use and addiction is endemic in the U.S. underclass and represents a potential coping strategy and aversive lifestyle adaptation to harsh conditions (Obot, 1996). However, U.S. substance use is a society-wide problem, and there is no simple formula to identify group or individual vulnerability for drug abuse or to reduce its pernicious effects. The most useful approach followed by researchers is to investigate the life course of those who experiment with drugs and ultimately progress to drug dependence in order to identify biologic, social–structural, and cultural determinants of drug use.

Contemporary Explanatory Models of Drug Use

Contemporary social science and epidemiologic research on drug use has subdivided into broad topic areas. One such topic area has focused on factors associated with drug use initiation and progression during childhood and adolescence, and there is a rich body of theory and epidemiologic data that has tracked patterns and risk factors (Baumrind & Moselle, 1985; Brook, Hamburg, Balka, & Wynn, 1992; Brook, Whiteman, & Gordon, 1983; Chavez & Swaim, 1992; Hawkins, Catalano, & Miller, 1992; Jessor, 1991; Kaplan, Johnson, & Bailey, 1988; Kaplan, Martin, & Robbins, 1985; Newcomb & Bentler, 1986; Oetting & Beauvais, 1991). This tradition has continued through the regular publication of sentinel survey data sponsored by the U.S. public health agencies, and we report some of this information in this chapter.

The second topic area has developed more recently, in part promulgated by the development of more sophisticated methodologies for measuring and categorizing the severity of drug use habituation as a medical disorder. Various protocols have been developed for "case-identification" of alcohol, tobacco, and illicit drug disorders which have utility for estimating the scope of the problem in populations and for treatment studies (Grant et al., 1993; Lucas et al., 2001; Robins et al., 1988; Wittchen et al., 1991). The actual criteria used for determination of "caseness" are continuing to undergo refinements. This second topic area has proven essential as a tool in the rapidly expanding research in neuroscience, which includes imaging and behavioral genetics (Tsuang, Bar, Harley, & Lyons, 2001; Volkow, Fowler, & Wang, 2002). These

newer directions are focused on drug effects in brain structure and functioning. Multiple methods of observation are used to identify biologic mechanisms implicated in addiction, and genetic determinants of vulnerability for serious drug problems *as a function of interactions with social environments* (Licinio, 2002). The interview-based case-finding protocols now regularly administered to respondents in epidemiologic and clinical research are considered adequate markers of an addiction *phenotype* for research purposes (Anthony, Warner, & Kessler, 1994). We present information in this chapter about drug disorders using medical criteria of the *Diagnostic and Statistical Manual*,Fourth Edition (American Psychiatric Association [DSM-IV], 1994).

In summary, the current state of substance use research is at a very important point of interdisciplinary integration, and the current emphasis on drug effects in brain functioning and consequent behavior, along with improved understanding of addiction as a chronic relapsing medical disorder, have acted as a stimulus for reorganizing and reinterpreting much of the epidemiologic information about drug use and progression.

The Importance of Social, Cultural, and Environmental Factors in Drug Use

Notwithstanding the fundamental importance of the biologic-genetic substrate in creating a vulnerability to addiction, the best evidence available suggests that environmental factors account for the overwhelming (and essential) influence in the development of substance addictions, as is the case for other complex diseases (Cooper, 2003). Only about 1 in 10 people who use potentially addictive substances become dependent on them. Biologic-genetic factors explain no more than 50% of the potential for addiction of even the most addictive substances and explain far less for most addictive substances. Simply put, biological processes of addiction, even those attributable to genetic propensities, are dependent on environmental stimuli. Therefore, research on personal, cultural, social stress, social-network, and environmental risk and protective factors continues to receive intense scrutiny. Research on drug addiction in recent decades has generated thousands of research papers covering these topics. Yet relatively few scientific papers have focused extensively on the unique features of minority substance use. This is surprising because there is great potential for improved models that provide a foundation for future gene-environment interaction research based on the unique patterns of substance use exhibited by U.S. minority groups (Vega & Gil, 1998).

This chapter briefly summarizes information about African American and Latino drug use, including the presentation of data from regional and national surveys. We focus on three sets of factors in this review: person and family factors, peer and delinquency factors, and educational and community factors. Each of these domains (e.g. pathways) has been shown in the research literature

to have important effects (risk and protective) on drug use and collectively form the basis for understanding human development in the first 20 years of life when experimentation, progression, and addiction to drugs reach their peak and negatively influence successful transitions into adult roles. Most "gateway" drug use leading to progression begins during late childhood, initially with rapid increases in use of drugs that are legally available to adults (e.g. alcohol, tobacco, inhalant agents, and over-the-counter medications) followed by abuse of these substances and, for some individuals, progression to marihuana use during early to mid-adolescence (Kandel, 1975; Kandel & Faust, 1975). Temporally the next step in the sequence is increased experimentation with other illicit drugs after mid-adolescence and the progression to drug dependence for a fraction of users.

Tobacco and alcohol (or both) are the customary "starter" drugs, and historically account for the greatest population burden of disease. Abstainers who never use these two substances have extraordinarily low rates of drug use (Vega, Chen, & Williams, 2007). Very few people begin experimenting with drugs after the age of 25; therefore delayed first use of drugs will slow the progression sequence and ultimately reduce population prevalence rates (Vega et al., 2002). Youth that begin the use of "gateway" substances (e.g. alcohol and tobacco) between 11 and 13 years of age have a much greater likelihood of progressing to addiction (Vega & Gil, 2005), and this basic pattern holds for African American and Latino youth as well, albeit with variations primarily in pathways (e.g. persistent vs. irregular use of gateway drugs) before progression to marihuana use (Ellickson, Hays, & Bell, 1992; Vega & Gil, 1998).

Factors Influencing Prevalence Patterns for African American and Latino Youth

The starting point for understanding the similarities and differences in African American and Latino drug use patterns is in childhood and adolescence. This is the formative period of family-social network and environmental influences on youth that affect socialization and social control around substance use. Both ethnic groups have similarly elevated high school drop out rates in high- risk urban areas and similar rates of children living in poverty (Kogan, Luo, Brody, & Murry, 2005). Available research has identified a subset of factors that have important effects on youth drug use. These factors do not have uniform effects in Latinos and African Americans.

African American and Latino Youth

African American youth offer the most dramatic departure from the expected patterns seen in U.S. culture regarding both risk factors and pathways to drug

use. Risk factor exposures are excellent predictors of adolescent experimentation with drugs; there is a strong linear correlation between the number of personal, family, peer, and other environmental risk factors experienced and the likelihood of drug use. However, for reasons that are not well understood, African Americans do not have the same reactivity as Latinos when exposed to the same level of risk factors during early adolescence, and their substance use rates for both licit and illicit drugs remain relatively low – below levels of Latino and non-Latino White youth – at this stage of development (Turner & Lloyd, 2003; Vega, Gil, & Zimmerman, 1993). Some researchers believe that differences in African American acculturation within family social networks deter early adolescent drug use by emphasizing anti-drug attitudes and social intolerance in domestic settings. However, the loss of traditions (e.g., deculturation and assimilation) in African American communities may now be having a "weathering" effect – especially in low income communities (Brook, Whiteman, Balka, Win, & Gursen, 1997; De La Rosa, Vega, & Radisch, 2000; Herd, 1987). The protective effects that suppress early substance use in African American communities have been obscured by the intense scrutiny given to female-headed households in poverty and Black male social deviance and incarceration rates. Research studies have shown consistently high levels of African American adolescent male conduct problems, and the expected pattern observed in other ethnic groups (including Latinos) is for conduct problems to co-occur with drug use.

While there is no longer a "typical family" configuration in American society, African Americans and Latinos do differ somewhat in modal family structure. About half of African American children and adolescents live in single parent households, and these families are more likely to be in lower socioeconomic circumstances. Among Latinos, children in immigrant families are more likely (nearly 80%) to reside in two-parent families, but the proportion of children in one-parent households nearly doubles (to nearly 40%) in the 2nd and 3rd generations of U.S.-born Latinos. The U.S. Latino population is undergoing a dynamic cultural shift, as 75% of the population is either foreign-born or children of foreign-born parents (U.S. Bureau of Census, 2002). A good indicator of this shift is increased family instability resulting in female-headed households in poverty, where children are at greater risk of problem behavior and substance use (Griffin, Botvin, Scheier, Diaz, & Miller, 2000).

Among both African Americans and Latinos, social network risk and protective factors are predominantly situated in the immediate family system for children and peer groups for adolescents. Family control of drug use is expressed through, (1) explicit communication of "no-tolerance" attitudes for drug use with children thus preempting "intentions to experiment" from forming and being acted on, (2) by modeling behavior through the presence or absence of substance use/abusing parents or other guardians, and in parenting styles (e.g. conflictive, authoritarian, authoritative, permissive) that reciprocally influence peer-group affiliations of adolescent youth, and (3) the above are reinforced by the strength of bonding emotional support ties in families (Elder

et al., 2000; Ellickson, Collins, & Bell, 1999; Gibbons, Gerrard, Cleveland, Wills, & Brody, 2004; Miller-Day, 2008). These processes have been shown to operate in African American and Latino families and to directly affect the anti-drug resilience of children (Belitz & Valdez, 1995; Brook et al., 2001; Cleveland, Gibbons, Gerrard, Pomery, & Brody, 2005; Griffen, Scheier, Botvin, & Diaz, 2000; Jessor, 1993; Lam et al., 2007; Martinez, 2006; McMahon, 2008; Stanton, Xiaoming, Pack, Cottrell, Harris, & Burns, 2002; Xiaoming, Feigelman, & Stanton, 2000).

Historically, African American adults have been characterized by high levels of abstaining from alcohol or illicit drug use. However, there has also been a problematic subgroup experiencing serious alcohol and drug use addiction problems. The situation is partially explained by the disproportionately high rates of abstaining African American female adolescents and adults, contrasted with higher rates of alcohol and illicit drug use among males (and to a lesser extent females) commencing in later adolescence, and progressing to addictive disorders in adulthood (Obot, 1996). This pattern is noteworthy because of the previously mentioned lower rates of substance use initiation in childhood and early adolescence among both boys and girls (Wallace et al., 2002). This delayed progression pattern defies the usual pattern of earlier initiation and progression seen in Latinos and represents a breakdown in protective effects during the critical period when African American adolescents approach important life transitions into adult social roles.

If social controls against drug use operating in indigenous African American and Latino social networks were less effective, we should expect to observe a much higher prevalence of drug use and addiction by 18 years of age in both populations. African American and Latino youth in early adolescence that have already started using alcohol, tobacco, or possibly other drugs are likely to have exceptional family risk factors and higher levels of health, mental health, and behavioral problems (Aktan, Kumpfer, & Turner, 1996; Brook, Adams, Balka, & Johnson, 2002; Gil, Vega, & Biafora, 1997; Gil, Vega, & Turner, 2002; Krohn, Lizotte, Perez, 1997; Vega, Chen, & Williams, 2007).

U.S.-born Latinos of both sexes, have somewhat higher rates than immigrants of drug experimentation and progression to addiction beginning in early childhood onward through adolescence. This trend is accompanied by weaker family cohesiveness and more family conflicts and parental risk factors, such as depression and substance use, than are found in the families of foreign-born Latinos (Gil, Vega, & Dimas, 1994; Martinez, 2006; Vega & Sribney, 2003). Foreign-born Latinos, especially females, who arrived in the United States during later adolescence or in adulthood, carry over from their nations of origin strong protective effects against illicit drug use. The exception is the subgroup of Latino foreign-born arriving in early childhood because they share a heightened propensity for drug experimentation and progression to dependence as do U.S.-born adult Latinos. The differences in rates of drug addiction between foreign- and U.S.-born Latino adults are large, and foreign-born women rarely experience drug addictions. These differences underscore the influential role of

culture in drug use-related socialization, and effects of social adaptation to U.S. society in the U.S.-born generations of Latinos. While Latino adolescent drug use rates are similar to those of U.S. non-Latino White rates, drug addiction rates for U.S.-born Latinos are usually higher than rates for immigrant Latino adolescents. Despite very low socioeconomic status and low educational attainment of foreign-born Latinos, their lifetime rates of addictive disorders and problem behaviors remain lower than U.S.-born Latinos (Ebin et al., 2001; Epstein, Botvin, & Diaz, 2000; Ortega, Rosenheck, Alegria, & Rani, 2000).

Neighborhood Effects on Drug Use

Many Latino and African American people live in neighborhoods where exposure to traumatic events, especially involving the witnessing of, participation in, or being a victim of violence, are commonplace (Brody et al., 2001; Sampson, Raudenbush, & Earls, 1997). In addition, both populations experience high levels of daily life hassles and stressors such as problems in provision of education for children, getting health care, employment instability, discrimination, and frustrated personal expectations. These factors have been shown to have long range effects on the drug use problems of both ethnic groups (Lloyd & Taylor, 2006; Turner & Lloyd, 2003). As noted previously, the anti-drug protective effects of some African American families attenuate in mid-to- late adolescence. Among Latinos, lowering exposure to traumatic events reduces problem drug use markedly, especially for females (Turner, Lloyd, & Taylor, 2005).

Geographic, or "place," effects include trauma, drug sales, and other risk factors, but also include assets which have been shown to reduce drug use. There are important regional, rural-urban, and neighborhood differences in drug use rates among all ethnic populations. Recently, attention has been given to neighborhood effects on drug use within urban areas. The fundamental question is "what value added does 'place' have for explaining drug use rates," including addiction and treatment rates, beyond individual, family, and peer risk factors? Secondarily, "how does place interact with ethnicity, or nativity in the instance of Latinos, to affect drug use?"

There are many methodological issues to contend with in sorting out an answer to these questions. Neighborhoods are influenced by similar macroeconomic and social determinants as are individuals, social networks, and organizations. Thus teasing out discrete effects of neighborhoods on drug use is a major challenge; but, the obvious importance of place in human development underscores the importance of overcoming these complex technical challenges (Roux, 2001; Sastry, Ghosh-Dastidar, Adams, & Pebley, 2006).

As an example, Americans change residences frequently, and the types of neighborhoods people reside in are probably more important for the trajectory of their lifetime drug use than where they are living in middle adulthood. Given the current reliance on cross-sectional surveys, it is difficult to "track" individuals

and account for the effects of life course geographic mobility. Overall "area" effects have been shown to be statistically significant for different types of health outcomes such as infant mortality, but frequently the magnitude of the effect is not impressive and is mediated by demographic factors such as foreign birth and language use (e.g. Spanish). Moreover, the temporal interdependence of person and place requires new methodological tools to measure and overcome problems of confounding. Logically, neighborhood characteristics are risk factors that would be expressed through limitations to healthy development imposed by the built environment, and social disorganization that fosters (1) access to and social support for drug use and marketing; (2) violence exposures as victim, witness, or perpetrator; and (3) weak social organizations, including families and educational institutions. The quality of current research is rapidly improving with increasing attention being given to methodological strategies that are better equipped to distinguish discrete levels of explanatory factors on human behavior. A foremost challenge to advance the field is collecting respondent information that is not routinely collected in large federal surveys such as data on neighborhood patterns of social networks and communication, social capital, social cohesion, and collective efficacy.

Prevalence Patterns of Substance Use Across Ethnic Groups

In this section, we provide an overview of epidemiologic trends in drug use by ethnicity as documented in recent national data sets. Table 15.1 presents prevalence estimates for cigarette, alcohol, and illicit drug use among youth aged 12–17 years in 2000, 2003, and 2006. White non-Latinos consistently reported the highest prevalence for all three periods. Notable exceptions to this pattern occur with lifetime illicit drug use in 2003, with Latinos reporting the highest rates. Importantly, for lifetime and past year illicit drug use, in 2003 and 2006, the rates for White non-Latinos, Latinos, and African Americans are very similar. Figure 15.1 provides a visual illustration of the trends for the three periods using past year use. Note the similarity among the three groups in 2006 (Fig. 15.1C). Finally, gender differences within Latino and Black subgroups are relatively minor. For example, for past year cigarette use, the rates are almost identical for males and females within these groups in 2003 and 2006. For past year alcohol use, the rates are also very similar in 2000 and 2006. However, it is important to note that the prevalence of past year alcohol use was higher for Black females than males for both 2000 and 2006, which is a countertrend to the long-standing patterns of abstinence.

Table 15.2 presents similar data for individuals aged 18–25 years. Note that the National Household Survey on Drug Abuse (NHSDA) does not provide gender-specific data for this age group. Findings for this age group are similar in that White non-Latinos reported the highest rates, followed by Latinos. However, there are several important differences. First, White non-Latinos are "ahead" by much

Table 15.1 Prevalence of cigarette smoking, alcohol use and illicit drug use among White, Black and Hispanic youth aged 12–17 years old in the United States (NHSDA)

					Latino		Black	
	Whites	Asians	Blacks	Latinos	Male	Female	Male	Female
2000								
Lifetime cigarette smoking (%)	38.1	23.6	24.4	31.2	32.7	29.6	25.3	23.4
Past year cigarette smoking (%)	23.6	13.9	11.6	18.7	19.3	18.1	13.0	10.2
Lifetime alcohol use (%)	44.3	30.5	32.1	41.8	42.2	41.4	32.9	31.4
Past year alcohol use (%)	36.3	21.4	21.2	32.4	33.0	31.8	20.8	21.6
Lifetime any illicit drug use (%)	27.6	17.3	24.5	27.3	28.9	25.6	25.5	23.5
Past year any illicit drug use (%)	19.7	11.6	15.3	18.2	18.6	17.7	16.3	14.2
2003								
Lifetime cigarette smoking (%)	33.3	17.7	24.3	31.0	31.4	30.6	24.5	24.1
Past year cigarette smoking (%)	19.3	07.8	11.9	17.4	17.3	17.5	11.9	11.8
Lifetime alcohol use (%)	44.8	27.7	36.1	45.3	43.4	47.3	36.2	36.0
Past year alcohol use (%)	37.2	20.9	24.5	35.1	32.9	37.4	22.5	26.5
Lifetime any illicit drug use (%)	30.8	20.1	30.4	31.5	31.7	31.2	32.1	28.6
Past year any illicit drug use (%)	22.9	12.6	19.2	21.6	21.3	21.8	20.3	18.2
2006								
Lifetime cigarette smoking (%)	28.5	14.7	20.0	24.3	25.4	23.1	19.8	20.2

Table 15.1 (continued)

					Latino		Black	
	Whites	Asians	Blacks	Latinos	Male	Female	Male	Female
Past year cigarette smoking (%)	19.5	11.0	10.8	15.1	15.2	15.0	11.0	10.5
Lifetime alcohol use (%)	43.1	27.4	34.4	39.5	39.7	39.2	33.2	35.6
Past year alcohol use (%)	36.7	20.2	24.1	31.3	31.4	31.2	22.7	25.6
Lifetime any illicit drug use (%)	27.7	24.2	28.5	26.4	26.8	26.0	30.0	26.9
Past year any illicit drug use (%)	20.2	13.7	18.6	18.8	18.0	19.6	19.7	17.3

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 2000; National Survey on Drug Use and Health, 2003, 2006.

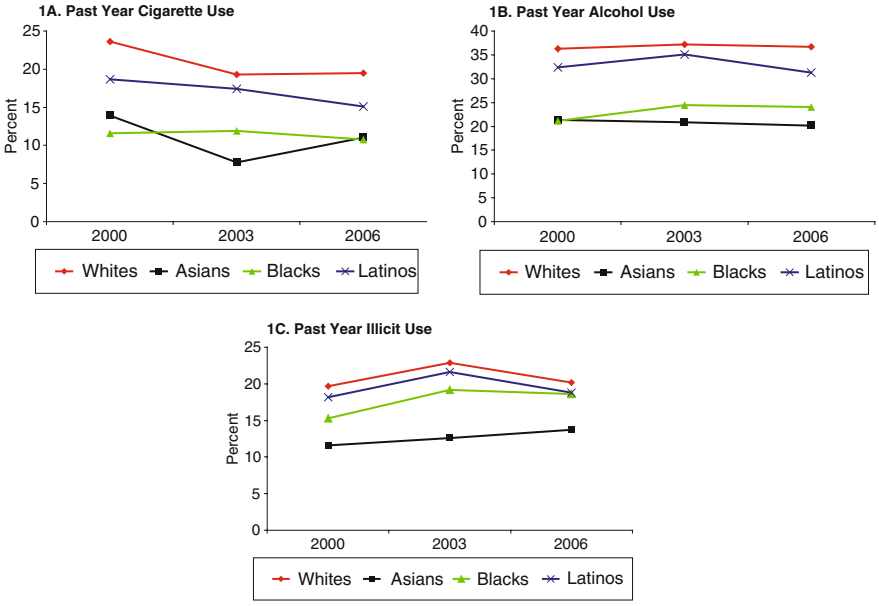

Fig. 15.1 Prevalence of past year use by Ethnic group among youth 12–17 years old (NHSDA)

Table 15.2 Prevalence of cigarette smoking and illicit drug use among White, Black, and Hispanic youth aged 18 to 25 years in the United States (NHSDA)

	Whites	Asians	Blacks	Latinos
2000				
Lifetime cigarette smoking (%)	74.1	41.9	50.2	57.6
Past year cigarette smoking (%)	51.9	27.4	31.5	34.5
Lifetime alcohol use (%)	88.2	66.2	76.2	76.7
Past year alcohol use (%)	80.1	58.4	62.5	63.9
Lifetime any illicit drug use (%)	56.1	27.9	44.5	39.2
Past year any illicit drug use (%)	30.7	14.0	24.7	20.2
2003				
Lifetime cigarette smoking (%)	75.6	52.4	55.8	66.2
Past year cigarette smoking (%)	53.3	33.4	33.0	41.9
Lifetime alcohol use (%)	90.7	79.0	78.6	82.9
Past year alcohol use (%)	83.4	67.6	67.9	70.2
Lifetime any illicit drug use (%)	65.1	43.1	54.6	52.2
Past year any illicit drug use (%)	38.2	22.1	30.6	27.5
2006				
Lifetime cigarette smoking (%)	73.2	47.2	51.4	59.4
Past year cigarette smoking (%)	53.4	33.1	33.0	38.3
Lifetime alcohol use (%)	90.9	76.5	77.4	80.4
Past year alcohol use (%)	85.1	67.3	66.7	69.4
Lifetime any illicit drug use (%)	64.7	37.3	51.9	48.7
Past year any illicit drug use (%)	38.9	20.5	29.2	25.0

Source: SAMHSA, Office of Applied Studies, National Household Survey on Drug Abuse, 2000; National Survey on Drug Use and Health, 2003, 2006.

larger margins. For example, the difference between White non-Latinos and Latinos was almost nonexistent for 12- to 17-year olds, but ranges from 9 to as much as 29 percentage points for those aged 18 to 25 years. This is likely to be influenced by the fact that many Latinos in this age group migrated to the U.S. postadolescence. Second, in this age group there are higher comparative rates of illicit drugs among Blacks, with rates that are second to those of White non-Latinos. This trend is also evident with the younger age group (Table 15.1), with the rates for Blacks approximating those of Latinos. Third, the rate of cigarette use among White non-Latinos is strikingly higher than that of all other groups. All these differences are visually better illustrated in Figs. 15.1 and 15.2.

Long-Term Impact of Early and Mid-adolescence Factors on Substance Use Disorders in Early Adulthood

The following longitudinal analyses utilize data from a cohort study of adolescents conducted in South Florida from 1990 to 2002 (Gil et al., 2002; Lloyd & Taylor, 2006; Turner & Lloyd, 2003; Turner, Lloyd, & Taylor, 2005; Vega &

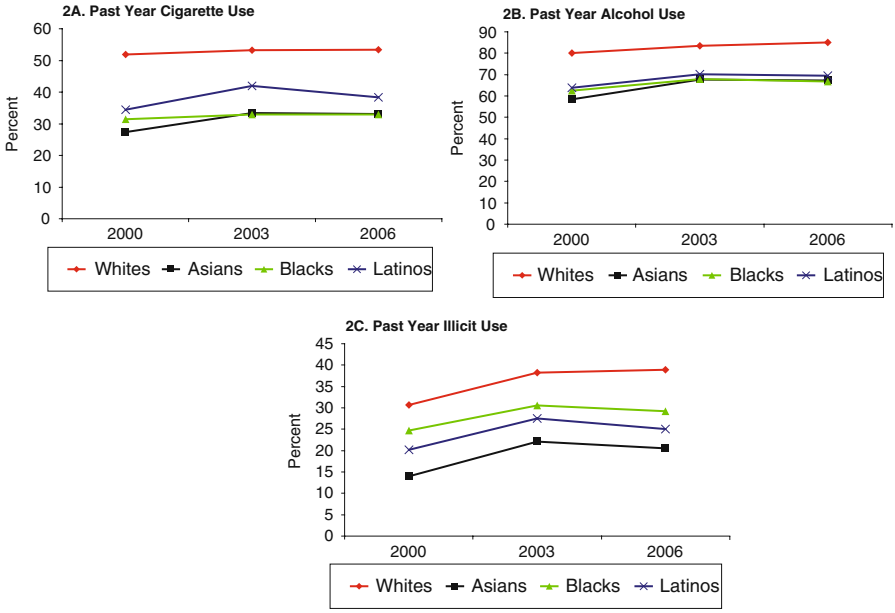

Fig. 15.2 Prevalence of past year use by Ethnic group among youth 18–25 years old (NHSDA)

Gil, 1998). We examine the changing effects of risk factors from early- to mid-adolescence, including the effects of U.S. census-based neighborhood poverty on drug addiction occurring in early adulthood, as determined using DSM-IV alcohol abuse/dependence, and drug abuse/dependence criteria. The risk factors are grouped in six domains: family environment, family structure, drug-use modeling, psychosocial factors, school factors, and delinquency factors. These domains are derived from an extensive empirical research literature, and details regarding these risk domains can be found in Gil et al. (2002). The *family environment* domain contains measures of familism, family communication, family cohesion, and parental derogation. The *drug use modeling* domain contains measures of parental smoking and drug use, as well as peer substance use. The *psychosocial factors* domain included self-esteem, depression, history of suicidality, and perceptions of life chances. *School factors* included perceived teacher derogation, official records in absenteeism and behavior problems and grades. Finally, *delinquency factors* consisted of perceived delinquency and delinquent behavior.

Table 15.3 presents unadjusted odds ratios for early and mid-adolescence. Table 15.4 presents adjusted risk factors during early adolescence in order to determine the impact of 1990 census neighborhood family poverty, while controlling for all the other risk factors. In Table 15.3, it is important to highlight the increase in the impact of all risk factors from early adolescence to mid-adolescence

Table 15.3 Unadjusted Odds Ratios of early and mid-adolescence risk domains for early adulthood DSM-IV Substance Disorders

	U.S. Latino		Foreign Latino		African American		European American	
	Alcohol Ab/Dep	Drug Ab/Dep	Alcohol Ab/Dep	Drug Ab/Dep	Alcohol Ab/Dep	Drug Ab/Dep	Alcohol Ab/Dep	Drug Ab/Dep
Early Adolescence								
Family Environment	1.3*	1.1	1.1	1.4*	1.5*	1.1	1.0	1.3*
Family Structure	1.3*	1.1	.89	.92	.72	.98	1.1	1.3*
Drug-Use Modeling	1.2	1.4**	1.2	1.2	1.3	1.2	1.2	1.5**
Psychosocial Factors	1.2	1.2	.99	1.1	2.0**	1.6**	1.0	1.6**
School Factors	1.3*	1.3*	1.1	1.2	1.5**	1.4*	1.2	1.7***
Delinquency Factors	1.4	2.0*	1.7*	2.1*	2.0*	2.4**	1.2	2.5***
Neighborhood Family Poverty	1.7*	1.6*	.95	1.1	1.8**	1.2	.58*	.75
Mid-Adolescence								
Family Environment	1.5*	1.3*	1.4*	1.2	1.9***	1.3*	1.3*	1.4*
Family Structure	1.2	1.2	.92	1.1	.81	.91	1.1	1.4*
Drug-Use Modeling	1.8***	1.5**	1.5*	1.2	1.1	1.2	1.4*	2.2***
Psychosocial Factors	1.2	1.3	1.1	1.1	1.9**	1.2	1.2	1.4*
School Factors	1.4*	1.6*	1.5*	1.7*	1.6*	1.4*	1.4*	1.3*
Delinquency Factors	2.8***	3.4***	4.2***	4.0***	1.6*	2.9***	2.6***	3.0***

Table 15.4 Adjusted Odds Ratios of mid- adolescence risk domains for early adulthood DSM-IV Substance Disorders

	U.S. Latino		Foreign Latino		African American		European American	
	Alcohol Ab/Dep	Drug Ab/Dep	Alcohol Ab/Dep	Drug Ab/Dep	Alcohol Ab/Dep	Drug Ab/Dep	Alcohol Ab/Dep	Drug Ab/Dep
Mid- Adolescence								
Family Environment	1.2	.91	1.2	1.4*	1.2	.87	.98	1.0
Family Structure	1.2	1.0	.80	.84	.67	.89	.94	1.1
Drug-Use Modeling	1.1	1.2	1.2	1.2	1.3	1.1	1.2	1.1
Psychosocial Factors	.97	.95	.80	.67	1.4*	1.3	.95	1.3
School Factors	1.3*	1.3*	.99	1.0	1.5*	1.2	1.2	1.5**
Delinquency Factors	1.0	1.8*	1.7*	1.9*	1.3	2.0**	1.0	1.5*
Neighborhood Family Poverty	1.9**	1.8*	.91	1.0	1.7*	1.2	.60*	.86

among U.S. Latinos. Among foreign Latinos, the delinquency factors are the most influential, particularly during mid-adolescence with equally high odds of 4.2 and 4.0 for alcohol abuse/dependence and drug/use dependence. It is also notable that the delinquency factors are influential for all ethnic groups and at both time periods. Finally, neighborhood poverty was significant for U.S. Latinos for alcohol and drugs, for African Americans for alcohol, and for European Americans for alcohol, but in the opposite direction, indicating that European Americans growing up in neighborhoods with less poverty were *more* likely to develop alcohol abuse/dependence.

Finally, Table 15.4 illustrates that neighborhood family poverty remained significant for U.S. Latinos even after controlling for all the other risk domains. Importantly, after the introduction of neighborhood family poverty into the model, only school factors remained significant for alcohol abuse/dependence, and only school and delinquency remained significant for drug abuse/dependence among U.S.-born Latinos. Among African Americans, neighborhood poverty remained significant for alcohol abuse/dependence, and delinquency factors were no longer significant. The neighborhood family poverty reduces or eliminates the effects of other salient psychosocial risk factors for both Latino and African American adolescent drug use.

Conclusion

Population drug use patterns are cyclical (Gfroerer & Brodsky 1992). Drug epidemics occur and penetrate into various minority communities idiosyncratically, and it is difficult to predict how rapidly they will spread across regions or the country, or how long they will endure. Generally, the secular trend has been toward decreases in the overall use of illicit drugs following a peak in the 1970s across all ethnic groups, albeit with occasional and stunning reversals such as crack cocaine and methamphetamine epidemics. The current epidemic of methamphetamine use is an interesting example of selectivity, with high impact on non-Latino Whites contrasted with less impact thus far on African Americans. Another example is the long-standing problem of inhalant abuse among Latinos and American Indians, with no comparable impact on African Americans (Mathew, Balster, Cottler, We, & Vaugh, 2008; Wallace et al., 2002). Inhalant abuse offers an illuminating comparison because substances used for inhalation are inexpensive and accessible to virtually all youth, which decreases the likelihood that access explains differences in use levels.

Despite the history of cyclical drug use patterns in the United States, there has been a consistent trend during the past 10 years regarding lifetime drug use among Latinos and African Americans. Despite somewhat lower prevalence of use among foreign-born Latinos, U.S.-born Latinos continue "catching-up" with White non-Latino adolescents and are starting experimentation at earlier ages. While African Americans continue to exhibit lower rates during early

adolescence, they are also "catching-up" with White non-Latinos during the period from mid- to later-adolescence. Gender differences, whereby females reported lower lifetime rates of substance use, are narrowing for both Latino and African American youth; however, alcohol and drug "disorder" (as differentiated from lifetime use) rates remain higher for males. These trends are illustrated by the national data presented in this chapter.

Recognizing that the peak period for developing drug dependence occurs between 15 and 29 years of age, a critical issue with Latinos is the very youthful structure of the population, since 40% of the population is younger than 21 years of age. This fact, combined with the facts that Latinos have high poverty rates, rapid population expansion, and increasing numbers of female-headed households living in poverty, underscores the need for broad public policy initiatives to decrease the burden of drug use for the entire population. There is increased evidence of trends toward higher lifetime and past year rates of drug use among Latinos similar to recent trends for African American adults, albeit not yet attaining the prevalence rates of White non-Latinos for licit or illicit drug use (National Institute on Drug Abuse, 1995). Although not specially addressed in this chapter, we also presented some data on Asians, who have consistently demonstrated lower rates for all substances except past year alcohol and cigarette use. For ethnic groups there are important variations in internal population characteristics that affect drug use levels.

While environmental factors influence drug use and misuse, there are complex reciprocal relationships between drug use and factors associated with the disproportionate residential patterns of ethnic minorities, whereby they are segregated into high-risk, high-stress environments where families in poverty, or nearly in poverty, are concentrated. While the risk factors domains utilized in the longitudinal studies presented in this chapter are broad in the sense that they involve family, school, peer, and psychosocial domains, the reality is that these risk exposures do not occur in isolation but are frequently accompanied by residential status in neighborhoods with many aversive features such as social disorganization, widespread violence, and substance abuse. Public policy must focus on reducing economic inequality, and public health and urban planners must focus on eliminating these environmental conditions, if meaningful changes in ethnic health disparities are to be accomplished (Robinson, 2008). This requires attention to the interactions that exist between multiple social and interpersonal levels in the causation of health disparities, including negative outcomes such as higher addiction rates (Gehlert et al., 2008).

The social conditions for minority children and their families which result in health disparities are numerous. Both Latino and Black children in the United States are more than 12 times as likely as White children to be poor and to live in poor neighborhoods (Acevedo-Garcia, Osypuk, McArdle, & Williams, 2008). The situation for a large proportion of Latino and African American children (20.5% and 17%, respectively) has been described as "double jeopardy," that is, circumstances of living in poor families and poor neighborhoods (Nicotera, 2008). Additionally, the conditions for poor Black and Latino children are

more severe than those of their White counterparts, with the typical poor Black and Latino child more likely to reside in neighborhoods of concentrated poverty than their low income White counterparts. For example, while the typical poor White child lives in a neighborhood where the poverty rate is 13.6%, the rate for Latino children is about twice as high (26%), and for Black children it is even higher (30%), reflecting *de facto* segregation patterns (Acevedo-Garcia, Osypuk, McArdle, & Williams, 2008). Adequate educational attainment is another important factor which has been identified as a marker for health disparities. Importantly, increases in life expectancies between the 1980s and 2000 appear to have been concentrated among highly educated groups (Meara, Richards & Cutler, 2008).

The health disparities found among minority populations in the United States are clearly connected to tobacco, alcohol, and other drug use (Spiegler, Tate, Aitken, & Christian, 1989; U.S. Department of Health and Human Services 1998). Similarly, drug use is related to disruptions in life span transitions, school achievement, employment, and family stability, and leads to lower socioeconomic status and involvement in the justice system (Blumstein & Beck, 1999). These problems exist within the context of detrimental social and economic conditions, and thus interventions and prevention efforts must occur within a larger policy context of addressing these root social conditions.

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