

CULTURAL SENSITIVITY IN SUBSTANCE USE PREVENTION

Ken Resnicow, Robin Soler, and Ronald L. Braithwaite
Rollins School of Public Health, Emory University

Jasjit S. Ahluwalia
*University of Kansas School of Medicine,
Departments of Preventive Medicine and Internal Medicine*

Jacqueline Butler
University of Cincinnati, School of Medicine

*The rationale for targeted and tailored substance use prevention programs derives from essentially three observations: 1) differences in substance use prevalence rates across racial/ethnic groups; 2) differences in the prevalence of the risk factors for substance use across racial/ethnic groups; and 3) differences in the predictors of substance use across groups. This article provides a model for understanding cultural sensitivity as it pertains to substance use prevention. Cultural sensitivity is defined by two dimensions, surface and deep structure. **Surface structure** involves matching intervention materials and messages to observable, “superficial” characteristics of a target population. This may involve using people, places, language, product brands, music, food, locations, and clothing familiar to, and preferred by, the target audience. Surface structure refers to how well interventions **fit** within a specific culture. **Deep structure** involves incorporating the cultural, social, historical, environmental, and psychologic forces that influence the target health behavior in the proposed target population. For example, peer influences may exert a greater influence on substance use initiation among White and Hispanic than among African*

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Correspondence to: Ken Resnicow, PhD, Associate Professor, Emory University, Rollins School of Public Health, 1518 Clifton Road, Atlanta, Georgia 30322. E-Mail: Kresnic@sph.emory.edu

American youth, while parental influences may be stronger among African Americans.

Whereas surface structure generally increases the "receptivity" or "acceptance" of messages, deep structure conveys salience. Techniques for developing culturally sensitive interventions, borrowed from social marketing and health communication theory, are described. © 2000 John Wiley & Sons, Inc.

Cultural sensitivity is perhaps one of the most widely accepted principles of public health. Whereas it is virtually self-evident, at least in a general sense, that substance use prevention and treatment programs as well as any health intervention should be tailored to the social and cultural characteristics of the target population, what such "tailoring" entails, how to achieve it, and its impact on outcomes has not been adequately described or empirically examined. This article will address the issue of cultural sensitivity (CS), primarily as it relates to developing substance use prevention programs. We begin by providing definitions and a conceptual framework for understanding CS and a discussion of the rationale for tailoring substance use prevention programs. Specific examples of how Alcohol, Tobacco, and Other Drug (ATOD) prevention programs can be tailored for racial/ethnic¹ populations are provided and we conclude by highlighting priority areas for future research. Much of our research has focused on African Americans and to a lesser extent Hispanic/Latino populations. Therefore, most of the examples provided herein relate to these two groups. Nonetheless, the principles discussed should be applicable to other racial/ethnic and sociodemographic subpopulations.

The lack of theoretical clarity and empirical research regarding CS is due, in part, to the inconsistent, if not confusing terminology that surrounds the construct. CS goes by many names, including cultural competence, culturally syntonic, culturally relevant, culturally appropriate, culturally consistent, multicultural, culturally legitimate, ethnically sensitive, cultural diversity, cultural pluralism, cultural tailoring, and cultural targeting (Airhihenbuwa, DiClemente, Wingood, & Lowe, 1992; Anonymous, 1992; Bayer, 1994; Henderson, Sampsel, Mayes, & Oakley, 1992; Isaacs & Benjamin, 1991; Marin et al., 1995; Schlesinger & Devore, 1995; Singer, 1991). Although definitions and distinctions for these terms have been offered, (Amuleru-Marshall, 1993; Anonymous, 1992; Bayer, 1994; Bazron, Dennis, & Isaacs, 1989; Isaacs & Benjamin, 1991; Morris, 1993; Sue, Mak, & Sue, 1998; Sue & Sue, 1999; Sussman et al., 1995) the terminology has no accepted standards. In response to this need, the following definitions are proposed:

Cultural sensitivity. The extent to which ethnic/cultural characteristics, experiences, norms, values, behavioral patterns, and beliefs of a target population as well as relevant historical, environmental, and social forces are incorporated in the design, delivery, and evaluation of targeted health promotion materials and programs.

Cultural competence. The capacity of individuals to exercise interpersonal cultural sensitivity (Marin et al., 1995). Thus, culturally competent refers to practitioners, whereas culturally sensitive relates more to intervention materials and messages.

¹Given the lack of consensus regarding the meaning of these terms, they have been combined into an aggregate phrase (Dole, 1995; Pasick, D'Onofrio, & Otero-Sabogal, 1996; Yee, Fairchild, Weizmann, & Wyatt, 1993).

Multicultural. Incorporating and appreciating perspectives of multiple race/ethnic groups without assumptions of superiority or inferiority. In this sense, culturally competent individuals and culturally sensitive interventions are implicitly multicultural. Cultural pluralism is a synonym.

Cultural tailoring. The process of creating culturally sensitive interventions, often involving the adaptation of existing materials and programs for racial/ethnic subpopulations (Pasick et al., 1996).

Culturally-based. This refers to programs and messages that use culture, ethnicity, history, and core values as a medium to motivate behavior change. Singer uses a similar term, culturally innovative, to define programs that use culture therapeutically (Singer, 1991, p. 276).

Ethnic identity. (EI) involves the extent to which individuals identify with and gravitate to their racial/ethnic group. EI includes elements such as racial/ethnic pride, affinity for in-group culture (e.g., food, media, and language), attitudes toward majority culture, involvement with in-group members, experience with and attitudes regarding racism, attitudes toward intermarriage, and the importance placed upon preserving one's culture and aiding others of like background (Resnicow & Ross, 1997; Thompson, 1992). For immigrant groups, EI includes aspects of acculturation, i.e., adoption of values and practices of the host country (Dana, 1996; Magana et al., 1996; Neff & Hoppe, 1992; Sue et al., 1998; Sue & Sue, 1999).

CULTURAL SENSITIVITY FURTHER DEFINED

CS can be conceptualized in terms of two primary dimensions (Resnicow, Braithwaite, Ahluwalia, & Baranowski, 1999a): *surface structure* and *deep structure*. Surface structure involves matching intervention materials and messages to observable social and behavioral characteristics of a target population. For audiovisual materials, surface structure may involve using people, places, language, music, foods, brand names, locations, and clothing familiar to, and preferred by, the target audience. Surface structure also includes identifying what channels (e.g., media) and settings (e.g., churches, schools) are most appropriate for delivery of messages and programs. It also entails understanding characteristics of the behavior in question, for example, what brands of cigarettes are smoked, and the context where substances use occurs. Cultural competence, or interpersonal sensitivity involves using ethnically-matched staff to recruit participants as well as design, deliver and evaluate programs (Sawyer et al., 1995).

Surface structure refers to the extent to which interventions meet target populations where they are; how well they *fit* within their culture, experience, and behavioral patterns. In this sense, surface structure is analogous to face validity of psychologic measures: a necessary but insufficient prerequisite for construct validity. Like face validity, surface structure is generally achieved through expert and community review as well as the involvement of the target population in the intervention development process (Resnicow et al., 1999a).

The second dimension of intervention sensitivity, deep structure, reflects how cultural, social, psychologic, environmental, and historical factors influence health behav-

iors differently across racial/ethnic populations (Airhihenbuwa et al., 1992; Marin et al., 1995; Morris, 1993; Pasick et al., 1996; Sabogal, Otero-Sabogal, Pasick, Jenkins, & Perez-Stable, 1996). This includes understanding how members of the target population perceive the cause, course, and treatment of illnesses as well as perceptions regarding the determinants of specific health behaviors. Specifically this involves appreciation for how religion, family, society, economics, and the government, both in perception and in fact, influence the target behavior. Among many African Americans for example, there is a belief that the US government may be covertly encouraging the spread of HIV/AIDS, guns, and drugs in their communities (Cochran & Mays, 1993; Gasch, Poulson, Fullilove, & Fullilove, 1991). Some Hispanics may feel that certain illnesses are a punishment from God or the result of the "evil eye" (Ailinger, 1988; Anonymous, 1990). Including messages that incorporate, though not necessarily refute these beliefs will likely enhance program effectiveness.

Whereas surface structure generally increases the receptivity, comprehension, or acceptance of messages (Simons-Morton, Donohew, & Crump, 1997), deep structure conveys *salience*. Surface structure establishes feasibility, whereas deep structure determines program impact.

Core cultural values that should be considered when developing ATOD and other health programs for African Americans include: communalism, religion/spiritualism, expressiveness, respect for verbal communication skills, connection to ancestors and history, commitment to family, and intuition and experience versus empiricism (Akbar, 1984; Butler, 1992; Cochran & Mays, 1993; Goddard, 1993b; Harris, 1992; Heath, 1989; Morgan, 1991; Nobles, Goddard, Cavil, & George, 1993). African culture is also characterized by a unique sense of time, rhythm, and communication style (Butler, 1992; Hecht, Collier, & Ribeau, 1993; Nobles et al., 1993). Implications for African Americans include the use of oral communication (i.e., interpersonal vs print interventions) as well as stories, religious/spiritual themes, and historical references to convey health messages. For Hispanics, core cultural values include familismo (importance of family), respeto (respect for elders), dignidad (the value of self-worth), caridad (the value of rituals and ceremonies), fatalism, and simpatía (the importance of positive social interactions) (Lalonde, Rabinowitz, Shefsky, & Washienko, 1997; Ramirez, Gallion, Espinoza, McAlister, & Chalela, 1997; Sabogal et al., 1987, 1996; Schinke, Moncher, Palleja, Zayas, & Schilling, 1988). The Novela format (i.e., the use of stories) may be a particularly effective mechanism to convey these concepts to motivate health behavior change (Lalonde et al., 1997).

CULTURAL SENSITIVITY AND SUBSTANCE USE PREVENTION

The rationale for targeted and tailored substance use prevention programs derives from essentially three observations: 1) differences in substance use prevalence rates and patterns of ATOD use across racial/ethnic groups; 2) differences in the prevalence of the risk factors for ATOD use across racial/ethnic groups; and 3) differences in the predictors of ATOD use across groups. Whereas the first two factors provide the rationale for *targeted* prevention programs, it is the latter that provides the basis for *tailoring* programs. Stated otherwise, factors one and two relate more to surface structure, while the latter has significant deep structure implications.

Substance Use Rates Differ Across Racial/Ethnic Populations

Perhaps with the exception of marijuana (Department of Health and Human Services, 1998; Kann et al., 1998), African American youth exhibit lower rates of all other substances than Whites (Department of Health and Human Services, 1998; Oetting & Beauvais, 1990; University of Michigan, 1997; Vega, Zimmerman, Warheit, Apospori, & Gil, 1993b; Wallace & Bachman, 1993; Wills & Cleary, 1997). This difference does not appear to be solely the result of underreporting or differential validity of self-report (Oetting & Beauvais, 1990; Wallace & Bachman, 1993; Wills & Cleary, 1997). Substance use rates for Hispanic youth tend to be higher than African Americans and are similar to those of Whites (Department of Health and Human Services, 1998; University of Michigan, 1997). However, comparison of rates among Hispanics to other groups is difficult, because use appears to vary by country of origin, acculturation level, and generationality (Bettes, Dusenbury, Kerner, James-Ortiz, & Botvin, 1990; Department of Health and Human Services, 1998; Neff & Hoppe, 1992; Sabogal et al., 1989; Szalay, Canino, & Vilov, 1993; United States Department of Health and Human Services, 1990). Asian and Pacific Islander youth tend to report the lowest ATOD use rates of the major racial/ethnic groups (Department of Health and Human Services, 1998).

Not only do rates differ, but patterns of use also vary by racial/ethnic group. For example, African Americans are far more likely than other groups to smoke menthol cigarettes (Hymowitz et al., 1995; Royce, Hymowitz, Corbett, Hartwell, & Orlandi, 1993). Both Blacks and Hispanics are less likely to be heavy smokers than Whites (Hahn, Folsom, Sprafka, & Norsted, 1990; Hymowitz et al., 1995; Novotny, Warner, Kendrick, & Remington, 1988; Royce et al., 1993) and are less likely to smoke light or low-tar cigarettes (Hahn et al., 1990; Hymowitz et al., 1995). There may also be racial/ethnic differences in how nicotine is processed, for example, African Americans exhibit equal or higher serum levels of nicotine metabolites, despite smoking few cigarettes per day, and they appear to clear nicotine slower than whites (Perez-Stable, Herrera, Jacob, & Benowitz, 1998).

Interestingly, whereas in adolescence African Americans exhibit lower ATOD use rates, by adulthood, rates equalize or even exceed those of Whites (Department of Health and Human Services, 1998; United States Department of Health and Human Services, 1998). Although the reasons for this paradox are not entirely understood, it is in part due to later initiation and lower quit rates (Fiore et al., 1990; Headen, Bauman, Deane, & Koch, 1991; Novotny et al., 1988; Royce et al., 1993; United States Department of Health and Human Services, 1998). Hispanics, on the other hand, may have an earlier age of initiation for marijuana than other groups (Sussman, Stacy, Dent, & Simon, 1996).

Racial/ethnic differences in the prevalence of risk factors for ATOD use include, for African Americans, higher school drop out rates, low socioeconomic status, more chaotic family life, and for Hispanics, acculturation stress (Catalano et al., 1993; Headen et al., 1991; Schinke et al., 1988; United States Department of Health and Human Services, 1990; Vega et al., 1993b). More specifically, compared to Whites, African Americans experience a greater number of negative stressful events; they experience different types of stressors and employ different types of coping strategies in response to stress (Airhihenbuwa & Cole, 1988; Fitzpatrick & Boldizar, 1993; Garrison, Schoenbach, Schluchter,

Kaplan, & Berton, 1987). They also derive social support, a buffer against stress, from different sources (Thomas, Bethlehem, & Holmes, 1992). Black adolescents are more likely than their White counterparts to be the victim of, or witness to violence, to experience death of a parent or sibling, to be involved in the criminal justice system, and to have parents whose income has recently decreased (Fitzpatrick & Boldizar, 1993; Garrison et al., 1987). Black youth also rate the impact of stressful events differently than White adolescents (Newcomb, Huba, & Bentler, 1986). Another important source of stress for African Americans is racism (Amuleru-Marshall, 1993; Cochran & Mays, 1993; Goddard, 1993a), which can increase feelings of anger, hostility, alienation, and helplessness, all of which have been associated with negative health outcomes (Barefoot, Dahlstrom, & Williams, 1983; Scherwitz et al., 1992). The higher levels of risk would appear inconsistent with the lower rates of ATOD use among AAs. One explanation for this apparent paradox is that the predictors of substance use, both risk and protective factors, function differently across racial/ethnic subgroups.

Racial/Ethnic Differences in the Predictors of Substance Use

Differences in the prevalence of substance use and its related risk factors provide the rationale for targeted ATOD interventions. However, these differences provide little guidance for tailoring interventions. This derives from an understanding of how the correlates and predictors of ATOD use and other health behaviors differ across racial/ethnic populations.

One example of ethnic differences in ATOD predictors is the relative effects of peers and parents. Numerous studies have found that peers exert a stronger influence on cigarette (Gottfredson & Koper, 1996; Headen et al., 1991; Koepke, Flay, & Johnson, 1990; Landrine, Richardson, Klonoff, & Flay, 1994; Sussman, Dent, Flay, Hansen, & Johnson, 1987) and other drug use among Whites and Hispanics than in Blacks (Dusenbury et al., 1992; Gottfredson & Koper, 1996; Ringwalt & Palmer, 1990).

Conversely, parents appear to have a greater impact on ATOD use among Black than White youth (Catalano et al., 1992; Clark, Scarisbrick-Hauser, Gautam, & Wirk, 1999; Koepke et al., 1990; Ringwalt & Palmer, 1990; Robinson, Klesges, Zbikowski, & Glaser, 1997). Smoking among Black youth is inversely associated with parental disapproval, whereas no such association is evident in Whites (Gritz et al., 1998). One explanation for the stronger impact of parental factors can be found in the work of Clark (Clark et al., 1999). In a survey of 256 white and 51 Black parents, she found that Black parents were far more likely than white parents to believe they can influence their children's smoking behavior (See Table 1). They are more likely to establish clear rules and expectations regarding smoking in the household, and are more likely than Whites to prohibit smoking in their cars (Royce et al., 1993).

In addition to differences in tobacco use socialization, African American parents are also more likely than European Americans to set and reinforce rules with their children about other drug use, to be proactive family managers, to punish unacceptable behavior, and to exert influence over who their children choose as friends, each of which may help explain the lower substance use rates among African American adolescents (Catalano et al., 1992; Koepke et al., 1990).

ATOD use may serve different functions across racial/ethnic groups. For example, African Americans may be more likely to use drugs to "anesthetize" the emotional effects

Table 1. Ethnic differences in parental attitudes regarding youth smoking

	% Agree	
	White	Black
All kids will try tobacco, it's part of growing up	54%	33%
Punishing kids for trying tobacco is <i>not</i> likely to keep them from trying it again	72%	22%
If parents forbid teens to use tobacco, they will only want to use it more	50%	12%
Schools can be more effective than parents in teaching children about the dangers of smoking	32%	9%

Data are from Clark et al. 1999.

of racism, poverty, oppression, and lack of opportunity (Amuleru-Marshall, 1993; Dawkins, 1988; Goddard, 1993a; Harvey, 1985; Schiele, 1996; U.S. Department of Health and Human Services, 1990). In one study, depression was a significant predictor of smoking initiation in White adolescents, but not Blacks or Hispanics (Gritz et al., 1998). While the greater involvement in religion on the part of Black youth is sometimes cited as a reason for their lower substance use rates, in one study, religiosity was protective against drug use in Whites but not Blacks (Amey, Albrecht, & Miller, 1996).

Smoking and cessation thereof, may serve different functions for Hispanics. For example, they may be less likely than Whites to smoke for relaxation and more likely to quit over concerns of harming the health of their children or to set a good example for their children (Marin et al., 1990, 1995). These factors differ by level of acculturation, with more acculturated Hispanics responding similar non-Hispanic Whites (Marin et al., 1990). The predictors of ATOD use also differ among Hispanics. For example, higher income is associated with lower alcohol-related problems in Hispanics but not for Whites or Blacks (Caetano & Clark, 1998), while intentions to use drugs are weaker predictors of actual use among Hispanics than Whites or Blacks (Maddahian, Newcomb, & Bentler, 1988).

Substance use behaviors cluster with other health and social risk behaviors differently among Blacks, Whites, and Hispanics. For example, in Whites, cigarette use is correlated with smokeless tobacco use, but there is no such association in Blacks and Hispanics (Escobedo, Reddy, & DuRant, 1997). Similarly, deviance and risk taking, and their association with substance use, appear to manifest differently across racial/ethnic groups (Bettes et al., 1990; Headen et al., 1991; Koepke et al., 1990; Landrine et al., 1994; Sussman et al., 1987).

PRACTICE IMPLICATIONS

Understanding ethnic and cultural differences in the predictors and determinants of substance use is an essential element in developing culturally sensitive ATOD interventions. Program planners could use these findings to shape their ATOD interventions in several ways. For example, interventions for African American youth may be more effective if they engage parents and other adult models whereas interventions for European American youth should perhaps focus more on altering perceptions of peer use and peer approval.

Although some of the differences cited above, such as the relative influence of peers versus parents as well as culturally-bound stressors, can serve as a starting point for program developers, it is important to examine these etiologic pathways in each specific population that will be served to determine their relevance and how they might be incorporated into intervention messages and services. Factors such as socioeconomic status, urbanicity, geographic differences, secular trends, and numerous other factors can alter how these phenomena affect ATOD use in specific populations. As will be discussed below, formative research with the local target population is a prerequisite for the development of sensitive interventions. This touches on the broader issue of within-group heterogeneity.

The Importance of Heterogeneity

Failure to appreciate the heterogeneity *within*, not only between, ethnic groups can lead to what has been called, ethnic glossing (Longshore, 1997; Trimble, 1990–1991), and ultimately insensitive and ineffective interventions. Thus, to achieve CS, at the level of surface or deep structure, it is essential to understand the heterogeneity of the target population (Pasick et al., 1996; Sabogal et al., 1996). For example, among African American youth living in low income public housing complexes (a seemingly homogeneous population) there will be considerable variability with regard to important predictors of substance use such as parental drug use, religiosity, educational attainment, and political beliefs. For Hispanic populations, there may also be variability in acculturation and country of origin (Bell & Alcalay, 1997; Dana, 1996; Magana et al., 1996; Negy & Woods, 1992). Whereas it may not be feasible or desirable to develop interventions segmented to each of these parameters, interventions can nonetheless incorporate multiple perspectives that appeal to a broad spectrum of the target population. In effect, through audience segmentation, even materials designed for a single racial/ethnic group can be “multicultural” (Simons-Morton et al., 1997). A related phenomenon is the fluidity of racial/ethnic group membership. Racial/ethnic populations may be defined by external parameters established by researchers, rather than any indigenous cultural ethos. For example, an African American group defined by church membership, will yield a different cultural subgroup than one defined by income status (Sasao, 1998).

An important dimension for which heterogeneity should be assumed is racial/ethnic identity (EI). EI varies considerably within superficially homogenous racial/ethnic populations (Cross, 1991; Cross, Parham, & Helms, 1991). For some individuals, race/ethnicity is central to their self-concept, while for others it plays a less prominent role. Using African Americans (AAs) as an example, EI can comprise various permutations of Pro-Black/Anti-Black and Pro-White/Anti-White beliefs (Cross, 1991; Parham & Helms, 1985b; Resnicow & Ross, 1997).

EI has been associated with substance use in AAs. For example, Anti-White attitudes have been associated with increased substance use in adolescents (Resnicow, Soler, Braithwaite, Selassie, & Smith, 1999b), while Pro-Black attitudes have been associated with stronger anti-drug attitudes (Gary & Berry, 1985; Resnicow et al., 1999b). In adults, involvement in Black networks and increased awareness of sociopolitical issues pertaining to Blacks are associated with decreased alcohol use (Herd & Grube, 1996). EI has been related to numerous other psychologic characteristics and health behaviors in adults and youth (Baldwin, 1984; Belgrave et al., 1994; Helms, 1990; Herd & Grube, 1996; Klonoff & Landrine, 1997; Munford, 1994; Oyserman, Gant, & Ager, 1995; Parham

& Helms, 1985a; Parham & Helms, 1985b; Phinney & Chavira, 1992; Scribner, Hohn, & Dwyer, 1995; Vega, Zimmerman, Warheit, Apospori, & Gil, 1993a).

PRACTICE IMPLICATIONS

The heterogeneity of ethnic identity has significant implications for developing culture-based interventions. In recent years, many health and social programs for African American youth have been based on African Centered principles, whereby participants are immersed in African culture and tradition to enhance cultural esteem and inoculate them against harmful behaviors (Damond, Breuer, & Pharr, 1993; Foster et al., 1993; Greene, Smith, & Peters, 1995; Nobles et al., 1993; Randolph & Banks, 1993; Schiele, 1996; Ward, 1995). Substance use and violence prevention programs, for example, have incorporated such culture-based elements as the study of African history, Kwanzaa, the Nguzo Saba, and African traditions such as Unity Circles and Rites of Passage ceremonies. Culture-based interventions have also been used with Hispanic, Native American, and Asian American populations (Baldwin et al., 1996; Lalonde et al., 1997; Marin et al., 1995; Ramirez et al., 1997; Shintani, Beckham, O'Conner, Hughes, & Sato, 1994; Singer, 1991). One application of culture-based messages involves using communal and family preservation as a motivation for behavior change. For example, youth may be discouraged from using drugs "for the sake of their community" or because "your people need you to be strong" (Resnicow et al., 1999a; Resnicow, Vaughan, Futterman, Weston, & the Harlem Health Connection Study Group, 1997). Similarly, messages could also address how African Americans are targeted by tobacco or alcohol manufacturers, or how smoking and drugs are modern forms of "slavery". Given the variability in ethnic identity however, Afrocentric or culture-based programs and messages, while on one hand potentially salient, must be carefully pretested, as some segments of the population may find them irrelevant, inflammatory, or offensive (if they don't place a high priority on ethnic identity, Afrocentricism, or community survival).

DEVELOPING CS INTERVENTIONS

The process of developing culturally sensitive ATOD prevention and treatment programs should begin with an analysis of substance use patterns, the risk factors for use, and the unique predictors of use in the target population. Whereas much of this information can be culled from the scientific literature, this process will likely require collection of new data, particularly to elucidate the predictors of use. Data for this analysis can be obtained from both quantitative surveys as well as qualitative techniques. Qualitative data collection can include exploratory or formative focus group as well as pretesting techniques based on principles of social marketing and health communications (Andreasen, 1995; Maibach & Parrott, 1995; Resnicow et al., 1999a; Simons-Morton et al., 1997). Quantitative methods may include surveys and secondary analysis of existing datasets or archival information.

Focus groups (FGs) are a potentially valuable means for developing CS intervention messages. At the formative level, members of the target population are convened to explore thoughts, feelings, experiences, associations, language, assumptions, environmental enabling and constraining factors, etc. regarding substance use as well as the frequency and context of use. Specific instructions for conducting focus groups can be found elsewhere (Basch, 1987; Krueger, 1988).

Exploratory FGs also provide an opportunity to examine the possible role of cultural-based messages. Although potentially costly, it can also be valuable when developing interventions for minority groups, to conduct a few groups with European Americans. Though some might view this as ethnocentric (by establishing white values and practices as the norm) or simply a waste of resources, contrasting responses from racial/ethnic populations with those of the majority culture can help crystallize the extent of tailoring required. Such groups can also elucidate the language used around a particular topic. For example, focus groups we conducted with Black smokers in Harlem revealed the term "loosies", which referred to single cigarettes purchased generally for \$.25 at newspaper stands. Incorporating such terminology can increase the surface structure sensitivity of an intervention.

It can also be useful to explore how the target population perceives that the prevalence, expression, and determinants of ATOD use may differ in their community relative to European Americans. When conducting exploratory groups for a smoking cessation program for low income African Americans, participants reported that for many African Americans smoking served as a stress reduction technique, whereas "White folk", they felt, "can just take a vacation" (Resnicow et al., 1997).

Focus groups can also be used for pretesting, during which materials and messages are exposed to members of the target audience to obtain feedback regarding format and content; surface and deep structure. Pretesting should be distinguished from pilot testing. The former typically involves exposing potential participants, under controlled conditions, to sub-elements of an intervention; specific messages, artwork, or intervention themes, to determine appropriateness and potential salience. Pilot testing on the other hand, usually entails delivering the actual intervention, under real world circumstances to a small number of participants, to determine feasibility of the intervention delivery process. During pretesting, participants are typically asked to rate materials using dimensions such as comprehension, interest, and attractiveness. It can also be useful to specifically inquire about the sensitivity of the materials and messages. This is often done with questions such as "how appropriate are these materials for people like yourself, or people with your background?"

Occasionally racial/ethnic populations may prefer audiovisual materials that represent or are designed for multiple racial/ethnic groups, as opposed to purely targeted materials. In some cases, audiences may perceive targeted interventions as singling out or casting an unfavorable light on their community. This reaction may be more likely to surface when addressing behaviors or illnesses associated with social stigma such as HIV and substance use, or issues for which there is a belief that the government contributes to the problem (e.g., guns, drugs, HIV). Additionally, among low income groups, there may be a preference for images that portray individuals from their same racial/ethnic group but from a higher socioeconomic bracket. Similarly, it cannot always be assumed that racial/ethnic groups prefer, or are more responsive to, in-group practitioners (Parham & Helms, 1981). Examples of how formative research has been used to develop culturally-sensitive substance use prevention programs can be found elsewhere (Harrington & Donohew, 1997; Ramirez et al., 1997).

KEY RESEARCH QUESTIONS

Above, we contend that culturally-sensitive substance use prevention programs are necessitated by differences in ATOD prevalence rates, patterns of use, risk factor distribu-

tion, and predictors of use. Controlled research demonstrating how these factors can be incorporated into prevention interventions, and what impact, if any, they have on outcomes is however, lacking. While the ethical or philosophic arguments for cultural sensitivity may not require scientific evidence, there are nonetheless several key empirical questions regarding feasibility and effectiveness that merit investigation.

With regard to surface structure, some of the assumptions are a priori valid. For example, it is largely self-evident that interventions should be written in the language of a population or at an appropriate reading level. However, other surface structure issues such as whether materials should portray role models exclusively from the target audience as opposed to mixed racial/ethnic backgrounds or if images should reflect the same socioeconomic background as the audience as opposed to a higher income bracket require empirical examination. Some bilingual populations may prefer interventions in English while others may prefer a mix of languages (Lalonde et al., 1997; Ramirez et al., 1997). Program developers may need to explore these issues each time they plan to introduce an intervention into a racial/ethnic subpopulation.

There has been inadequate research examining how the greater use of menthol cigarettes on the part of African Americans can be effectively incorporated into prevention and treatment interventions. For example, it may be important to communicate that menthol brands are as harmful as non-menthol cigarettes. Similarly, how the fact that African Americans tend to smoke fewer cigarettes per day [yet maintain equal or higher serum levels of nicotine (Perez-Stable et al., 1998)] than other groups can be incorporated into prevention programs has also not been adequately explored.

Little is known about how racial/ethnic groups may respond differentially to drug use prevention interventions, nor how much tailoring is needed (Dent et al., 1996). If the predictors of substance use are in fact different across groups, then it would be expected that response to interventions would also vary. In one study, African American youth rated a multicultural drug prevention video intervention more highly than Whites, and there was some indication that the program had a greater impact on the behavioral intentions of AAs (Freimuth, Plotnick, Ryan, & Schiller, 1997). Similarly, numerous studies have shown that adolescents' perceptions regarding the prevalence and acceptability of substance use among their peers is one of the strongest predictors of substance use, and interventions that focus on altering these perceptions may be more effective than programs that target refusal skills (Donaldson, Graham, Piccinin, & Hansen, 1995; Donaldson, Graham, & Hansen, 1994; Hansen & Graham, 1991). Because peer influences appear less predictive of substance use in African Americans, it follows that normative education and peer resistance programs may be less effective for this population. There has been little research testing this hypothesis. In fact, evidence from Botvin's Life Skills Training program, which includes a normative education and peer refusal component, suggests the intervention works equally well in White, Hispanic, and Black youth (Botvin, Baker, Dusenbury, Botvin, & Diaz, 1995a; Botvin & Dusenbury, 1992; Botvin, Batson, Witts-Vitale, Bess, & Dusenbury, 1989). Project Alert appeared to work as well or better in minority than White students (Ellickson & Bell, 1990), whereas the effects of Project SMART did not generally differ by ethnic group, although there was some evidence that the program was more efficacious in Asians than Blacks, Hispanics, or Whites (Graham, Johnson, Hansen, Flay, & Gee, 1990). To date, there is little evidence documenting that substance use prevention programs, including those that involve peer resistance skills training, are more or less effective in minority youth.

A key phenomenon that remains under-researched is the substantially lower substance use rates that have been documented among African American (and Asian) youth. Rather than approaching minority populations from a deficit model, these lower rates among Black youth provide an opportunity to use Black culture as the exemplar. The possible protective role of parental monitoring, family bonding, spirituality, and other positive attributes of Black family life and culture that may buffer Black youth from ATOD use have not been adequately explored (Gary & Littlefield, 1998; Goddard, 1993b; Pinkett, 1993). Other avenues of exploration include how exposure to problem drug use as well as the crime and violence associated with the sale and use of drugs in the home and the community may discourage use among minority youth. Additional research is needed to understand ethnic differences in ATOD use, and eventually how the protective factors identified can be incorporated into prevention programs for both minority and majority youth.

Even less is known about the efficacy of deep structure and culture-based messages. Controlled trials comparing the efficacy of CS vs. standard (Non-CS) materials are needed. To a great extent, it is not known if CS programs are in fact, more effective (Dent et al., 1996). In one study, the effects of a culturally-tailored substance use prevention intervention were not superior to a generic intervention among a sample of African American and Latino youth at one-year follow (Botvin, Schinke, Epstein, & Diaz, 1994), although effects for the tailored intervention appeared to be superior at the two-year followup (Botvin, Schinke, Epstein, Diaz, & Botvin, 1995b). To investigate the efficacy of CS materials with a high degree of internal validity, it is important to use comparison materials that are similar in as many dimensions as possible to the CS materials. For example, it may be possible to hold constant key scientific content and health education messages as well as the length of video or print interventions, and only vary the method of conveying content, i.e., the tailored elements of the intervention. An example of this can be found in Sussman et al. (Sussman et al., 1995).

Similarly, despite the inherent appeal of using culture to enhance self-esteem and motivate positive behavior change, little is known about the feasibility (acceptance) or efficacy (salience) of culture-based interventions. Many programs have incorporated culture-based themes, but they have rarely been isolated experimentally, so the unique impact of the culture-based components is not well understood (Davis, Lambert, Cunningham-Sabo, & Skipper, 1995; Freimuth et al., 1997; Harrington & Donohew, 1997; Lalonde et al., 1997; Long, 1993; Maypole & Anderson, 1987; Nobles et al., 1993; Ramirez et al., 1997). It should be noted that some might contend the need for "controlled research" documenting the efficacy of such interventions is an Ethnocentric (and perhaps unnecessary) assumption to document what is intuitively known and inherently valuable. Nonetheless, given the diversity of EI among AAs, it is possible that programs that use culture-based messages may be not only ineffective, but somewhat paradoxically, even culturally insensitive for some populations (Cross, 1991). Afrocentric interventions may, for example, be more acceptable and salient among African American teens but less so among older African Americans. Controlled studies comparing culture-based vs standard culturally-sensitive interventions are needed.

Additional research issues include determining how surface and deep structure messages may function differently across racial/ethnic and sociodemographic subpopulations; which populations are more or less responsive to cultural-based messages; and which elements of ethnicity and culture are independent of socioeconomic factors. Research is also needed to delineate core cultural values across racial/ethnic populations, the ex-

tent to which individuals ascribe to these values, and how they can be incorporated into substance use prevention and treatment programs.

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