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Identifying At-Risk Asian-American Adolescents in Multiethnic Schools: Implications for Substance Abuse Prevention Interventions and Program Evaluation

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Editor's Note: This chapter argues for a comprehensive approach to understanding the etiological factors that put Asian-American adolescents at risk for substance abuse. All groups and individuals exhibit strengths and weaknesses in dealing with risk. Yet, as a society, we typically focus on the weaknesses. Culturally competent providers and researchers must develop a holistic framework within which to view clients and health intervention outcomes.

The author examines a segment of the Asian-American and Pacific Islander youth population that exhibits a lower-than-average rate of alcohol, tobacco, and drug use to facilitate our understanding of how resiliencies are developed for resisting substance abuse. Primary healthcare providers and researchers can use this knowledge to teach families how to nurture these resiliencies in their children and to develop community-wide

strategies that bolster these resiliencies in adolescents. Primary care professionals can thus help families counteract the negative influences of acculturation, while fostering health promotion and disease prevention.

Introduction

Designing and evaluating prevention interventions for ethnic-cultural groups requires a thorough understanding of *culture-specific* etiological risk factors for substance use (see Catalano et al., 1993; Kim, McLeod, & Shantez, 1992; Maddahian, Newcomb, & Benter, 1988; Orlandi, 1986; Trimble, Bolek, & Niemczyk, 1992). Indeed, careful screening and selection of participants for prevention programs is pivotal to success in minimizing or reducing substance use and abuse among adolescents in our increasingly diverse schools (Gilchrist, 1991; Trickett & Birman, 1989).

Past research on the etiology of substance abuse has identified a number of risk factors for general populations (Dryfoos, 1990; Moncher, Holden, & Schinke, 1991), including low self-esteem (Kaplan, 1985), academic failure (e.g., Jessor, 1976), peer and parental influences (e.g., Brook, Brook, Gordon, Whiteman, & Cohen, 1990), and economically disadvantaged conditions (e.g., Lorion & Felner, 1986) (for a comprehensive review of the etiology of substance use among adolescents, see Dryfoos, 1990; Hawkins, Catalano, & Miller, 1992; Lorion, Bussell, & Goldberg, 1991). However, despite the increasing diversity and numbers of ethnic-cultural groups represented in our schools, few theoretical approaches are available to guide the implementation and evaluation of culturally relevant substance abuse prevention programs, especially with those adolescents who are often depicted as the problem-free "model minority" (i.e., Asian-Americans; Walsh, 1993). Thus far, most prevention models, such as problem behavior theory (Jessor & Jessor, 1977) and social learning theory, have failed to consider *extraindividual* factors (e.g., interaction of individuals in context; ethnic-cultural groups in school settings, such as Asian clubs), thus limiting the applicability of such models to adolescents in multiethnic or

multicultural contexts. Apparently, there is a lack of attention to the importance of ethnic-cultural individuals in context in addressing social issues such as substance abuse prevention (see Trickett & Birman, 1989).

As Trimble (1990-91) lamented regarding the current use of "ethnic glosses" (i.e., selection on the basis of ethnicity or race) by researchers, the majority of substance abuse prevention research with ethnic-cultural populations has been conducted with "at-risk" individuals. These individuals are identified on the basis of their membership in an ethnic-cultural category, not necessarily on the basis of any risk factors (see Sasao & Sue, 1993; Trimble, 1990-91). The exclusive use of ethnic group membership and the predominant view that it is a static as opposed to a dynamic variable may yield rigid and useless guidelines for substance abuse prevention programs because ethnicity/race variables per se are not amenable to intervention strategies (Gilchrist, 1991). Furthermore, when programs are designed for a particular ethnic-cultural group without regard to an understanding of multiple risk factors (e.g., individual-, family-, and school-level factors and interactions thereof), these programs tend to "blame the victim" (see Ryan, 1976) if such a "culturally anchored" approach does not fare well with certain subgroups of the ethnic-cultural group.

For example, most of the substance abuse prevention programs for Asian-American adolescents rely on school personnel to identify and refer potential participants. Identification of Asian-American adolescents at risk for substance abuse is usually based on individual risk factors derived from the model minority thesis (Sue & Morishima, 1982). Therefore, an Asian-American student who acts in a way contrary to what is expected—one who is too loud and outspoken, is disobedient, fails academically, or acts out—is considered a good candidate for a culturally anchored prevention program. On the other hand, an Asian-American adolescent who conforms to the model minority image may not be considered for prevention programs despite indicators that many such individuals later develop substance abuse or related problems (Masuda, Asian Pacific Family Center, personal communication, 1992).

Thus, the current model minority approach to identifying and selecting at-risk Asian-American adolescents for prevention programs is problematic. First, we know very little about the range of risk factors that predict future use and abuse of alcohol and drugs among ethnic-cultural youths (Trimble et al., 1992), especially Asian-American adolescents (Zane & Sasao, 1992). This lack of knowledge may lead to underidentification of potential participants who might benefit from prevention interventions, or overidentification of participants who could more appropriately be placed in treatment programs (e.g., adolescents who are already abusing alcohol or drugs and who have caught the attention of law enforcement officers). Second, the majority of prevention approaches (e.g., Botvin & Willis, 1985; Pentz, 1985) examine and emphasize the impact of *individual-level* risk factors as opposed to *ecological-contextual* factors. Maddahian et al. (1988) found that Asian-American college students who were low in religiosity and self-esteem experienced poor family relationships and were rated high on sensation-seeking tendencies (i.e., they were more likely to succumb to substance abuse). As noted previously, with an increasingly diverse multiethnic or multicultural adolescent population, an emphasis on individual-level factors may not be optimal; cross-cultural research indicates that psychosocial risk factors are *culture-bound* and *context-dependent* (see Jessor, 1992). For instance, Markus and Kitayama (1991) reviewed cultural influences on the concept of self and showed that Asian cultures tend to focus on the context in which the self is viewed (*interdependent self*) whereas non-Asian, Western cultures tend to focus on the *independent aspect of self*. Thus, even seemingly individual behaviors (e.g., decisions to experiment with alcohol) need to be understood in the social contexts in which they occur. Because of the increasing cultural and ethnic diversity in the United States, prevention researchers and practitioners must be able to focus on Asian-Americans in their multicultural or multiethnic contexts, such as schools and neighborhoods (Sasao & Sue, 1993). Furthermore even the effect of culture-bound factors, such as ethnic identity for Asian-Americans, need to be understood within the context of immigrant history and acculturation issues (Cheung, 1993).

Therefore, in order to optimize the effectiveness of culturally anchored prevention programs for Asian-American adolescents, we must understand and develop strategies for identifying at-risk Asian-American adolescents and expand our knowledge about the salience of contextual risk factors as well as individual-level psychosocial factors for alcohol and drug experimentation and use (see Bronfenbrenner, 1979; Kumpfer & Turner, 1990-91). Only then can we begin to develop an appropriate theoretical model to guide future prevention programming and evaluation efforts so that we do not have to rely on stereotypical identification of participants.

This chapter argues for the development of a comprehensive framework for understanding the etiology of substance use among Asian-American adolescents. It is based on an etiological study (Sasao, 1994) conducted in three multiethnic high schools in Southern California, where Asian-American and other adolescents share a multicultural context (i.e., school setting). The study examined the extent of substance use among students (mainly Asian-Americans and Mexican Americans) in the three high schools as a function of demographic, psychosocial, interpersonal, and contextual factors (e.g., intergroup relations). It was predicted that in addition to well-established effects of individual-level risk factors (e.g., gender, academic achievement), substance use among Asian-American adolescents would be significantly associated with other extraindividual factors such as school interethnic climate and attending different schools. Finally, a theoretical model is proposed that links individual-level and contextual-level risk factors for substance use among ethnic-cultural individuals and the implications of those factors for prevention interventions and evaluation.

The 1992 San Gabriel Valley High School Student Survey

Methodology

Overview

The 1992 San Gabriel Valley High School Student Survey (Sasao, 1994) was a districtwide survey of 9th through 12th grade stu-

dents in three high schools in the suburban region of Los Angeles (San Gabriel Valley). Alhambra City School District encompasses two cities, Alhambra and San Gabriel, where both Asian and Hispanic immigrant populations have dramatically increased in the past decade (United Way, 1992).¹ A total of 1,987 students were surveyed in 20 to 25 randomly selected classrooms at each school. The sample in the original survey consisted of 712 students (35.8 percent) from School A, 656 students (33.0 percent) from School B, and 619 students (31.5 percent) from School C. Four grade levels were distributed in proportion to the student statistics: 31.9 percent 9th graders, 27.8 percent 10th graders, 20.8 percent 11th graders, and 19.5 percent 12th graders. Overall, the gender distribution of the sample was approximately equal: 48.5 percent boys and 51.5 percent girls. All three schools were represented by a number of ethnic-cultural groups, the largest of which were Chinese, Vietnamese, and Hispanics (Chinese: school A, 35.1 percent; school B, 55.5 percent; school C, 40.4 percent; Vietnamese: school A, 12.4 percent; school B, 13.4 percent; school C, 10.0 percent; Hispanics: school A, 35.9 percent; school B, 18.9 percent; school C, 34.5 percent; Whites: school A, 5.4 percent; school B, 1.9 percent; school C, 4.0 percent; Others (including Mixed Heritage): school A, 11.2 percent; school B, 10.3 percent; school C, 11.1 percent). The percentage of foreign-born students was 69.9 percent ($n=1,389$); most were immigrants from Asian countries and Mexico. The demographics of the sample closely approximated those of all high school students in the San Gabriel Valley.²

Asian-American Students in the Sample

The focus of this study was a group of 953 students who identified themselves as Chinese ($n=749$) or Vietnamese ($n=204$). The 136 students from other Asian-American and Pacific Islander groups were classified as Other and were excluded from the analyses.³ The distributions of gender and grade levels within each Asian-American group were almost proportional to those of the overall school statistics.

Survey Instrument

Data were collected via a 50-item self-report questionnaire whose items were based on questions about demographic information,

risk factors, and substance use taken from existing surveys (e.g., the Monitoring the Future Survey, Johnston, O'Malley, & Bachman, 1989; the Effectiveness School Survey, Gottfredson, 1986). Selection of risk factors was based on the extant literature on risk factors for substance use and related problems (e.g., Hawkins et al., 1992). The survey contained four sections: (a) sociodemographic information, (b) psychosocial risk factors, (c) interpersonal factors, and (d) ecological-contextual factors. Sociodemographic information included race/ethnicity, age, gender, grade level, place of birth (U.S.-born vs. foreign-born), living with both parents or not, and English language as a primary language at home. Four psychosocial risk factors were (1) subjective well-being (constructed as a composite of several questions on psychological and physical well-being, eating habits, sleep routines, exercise habits, and general happiness); (2) ethnic identification (a composite index based on five items selected from the Multigroup Ethnic Identity Measure [Phinney, 1989], including items about the individual's perception of belonging to his or her ethnic group and ethnic pride in that group); (3) self-esteem (the 10-item Rosenberg Self-Esteem Scale [Rosenberg, 1965], focusing on the individual's perception of self-worth, self-respect, and self-pride, with four response alternatives: strongly agree, agree, disagree, and strongly disagree); and (4) sense of fit on campus (a single item asking if students feel they fit well with people of their own age on campus). Two indices of interpersonal influences on substance use were extent of parental anger if respondents used alcohol or drugs (1 = not at all angry, 4 = very angry) and degree of peer disapproval if respondents used alcohol or drugs (1 = strongly approve, 4 = strongly disapprove). With respect to ecological-contextual factors, a single composite index was constructed to assess perceived interethnic climate on campus with three items assessing possible ethnic tensions in the schools, the degree of other students' negative feelings toward the respondent's ingroup members, and the degree of the respondent's negative feelings toward other students on campus.

Substance abuse and experimentation were assessed by asking whether the students had tried "gateway drugs" (cigarettes, alcohol, and marijuana) ever in their lifetime and whether they had used cigarettes and alcohol within the previous 30 days or marijuana within the previous 12 months. Because of the highly

skewed distributions of these substance use indices, they were all dichotomized prior to analysis. Additional items were included to assess self-reported use of drugs such as cocaine and hallucinogens, but these were excluded from the analysis because of low frequency of use in the survey sample.

Findings

Mean Prevalence of Substance Abuse

Table 5.1 summarizes mean prevalence of gateway drug use by ethnic group. Between-group differences for each substance were tested with a one-way analysis of variance (ANOVA). Both Chinese and Vietnamese students had significantly lower use of cigarettes than did Hispanic, Whites, and Other students. However, Vietnamese students who had smoked cigarettes at least once were likely to report a higher 30-day use than were Chinese, Hispanic, or White students. Like cigarette use, lifetime use of alcohol was lowest among Chinese and Vietnamese students, while Hispanics and Whites had substantially higher levels of use. Likewise, the patterns of alcohol use in the past 30 days were very similar to those of lifetime use. When asked if they ever used marijuana in their lifetime, all of the Asian students indicated substantially lower prevalence rates than the other groups, and again, the two Asian groups had the lowest prevalence of marijuana use. Interestingly, however, the prevalence for 12-month use of marijuana among Vietnamese students was significantly higher than that of Chinese students and was almost equal to those of other ethnic-cultural groups.

Additionally, school differences were tested via a one-way ANOVA on each of the substances used. Although no significant differences were found, school C had slightly higher percentages than schools A and B in terms of lifetime cigarette and alcohol use ($p < .07$). No other comparisons yielded significant differences across the three schools.

Overall Substance Use Index

Because high school may represent the most vulnerable and unstable period of life, experimentation or use of only one substance

Table 5.1. Prevalence of substance use among students, San Gabriel Valley High School, 1992, by ethnic group

Ethnic Group	Chinese (n=749)		Vietnamese (n=204)		Hispanic (n=519)		White (n=66)		Other (n=433)	
	Mean (Standard Deviation) n ^a		Mean (Standard Deviation) n ^a		Mean (Standard Deviation) n ^a		Mean (Standard Deviation) n ^a		Mean (Standard Deviation) n ^a	
Cigarettes or tobacco	Lifetime	.24 ^a (.42) 749	.23 ^a (.42) 749	.23 ^a (.42) 749	.54 ^b (.50) 513	.44 ^b (.50) 66	.42 ^b (.49) 433		.42 ^b (.49) 433	
	Previous 30 days	.29 ^a (.45) 174	.45 ^b (.50) 49	.35 ^b (.48) 277	.24 ^a (.44) 29	.39 ^b (.49) 186				
Alcohol	Lifetime	.37 ^a (.48) 746	.28 ^a (.45) 204	.66 ^b (.47) 517	.68 ^b (.47) 66	.57 ^b (.49) 431			.57 ^b (.49) 431	
	Previous 30 days	.28 ^a (.45) 283	.24 ^a (.43) 58	.59 ^b (.49) 339	.36 ^b (.48) 45	.45 ^b (.50) 248				
Marijuana	Lifetime	.03 ^a (.17) 744	.06 ^a (.24) 204	.23 ^b (.42) 513	.18 ^b (.39) 66	.16 ^b (.37) 430			.16 ^b (.37) 430	
	Previous 12 months	.47 ^a (.51) 42	.67 ^b (.49) 15	.78 ^b (.42) 126	.67 ^b (.49) 12	.77 ^b (.43) 77				

^aSample size used to calculate means.

may simply be a manifestation of this instability (Seifert & Hoffnung, 1987). Therefore, as a more stable predictor of substance abuse, an overall index was created by summing over three dichotomous indices of gateway drugs (cigarettes, alcohol, and marijuana). The index ranged from 0 (no drug use) to 3 (lifetime use of all three substances). Moreover, it was desirable to use this index, rather than specific substance use items, to identify adolescents who would be most likely to benefit from prevention interventions in a cost-efficient manner. Table 5.2 presents the means and standard deviations of the index by ethnic groups. As expected, Chinese and Vietnamese students reported the lowest level of overall drug use. Hispanic students reported the highest level, followed by Whites and Other.

Table 5.2. Substance use index scores for students, San Gabriel Valley High School, 1992, by ethnic group

	Ethnic Group			
	Chinese (n=735)	Vietnamese (n=201)	Hispanic (n=508)	White Other (n=66) (n=365)
Mean	.64 ^a	.56 ^a	1.44 ^b	1.30 ^b
(Standard Deviation)	(.85)	(.89)	(1.12)	(1.08)
			(1.10)	(1.10)
				(1.05)

Note. Substance use index scores ranged from 0 (no substance use) to 3 (lifetime use of cigarettes, alcohol, and marijuana). Differences among means with different superscripts (a, b, or c) are statistically significant at the 5 percent significance level.

Identifying Asian-American Adolescents at Risk for Substance Abuse: A Hierarchical Regression Analysis

To assess the contributions of various risk factors for substance abuse among Asian-American students in the sample, a hierarchical multiple regression was used. Table 5.3 displays the results of regressing the overall substance use index on four sets of risk factors: (1) demographic factors (Chinese ethnicity, male gender, foreign-born status, no intact family, and English not a primary language used at home); (2) psychosocial factors (low subjective well-being, low ethnic identification, low self-esteem, and no sense of fit on campus); (3) interpersonal influence factors (degree of parental anger and peer disapproval if alcohol or drugs were used); and (4) contextual factors (two dummy variables representing three schools, and an interethnic climate in-

dex). Each of these sets was entered sequentially into the regression equation, and the overall adjusted R^2 after entry of all variables was .17 ($p < .01$).

Table 5.3. Hierarchical regression of substance use index on risk factors among Chinese and Vietnamese students, San Gabriel Valley High School, 1992

Risk factor	β	ΔR^2	R^2
Step 1: Demographic factors			
Ethnicity (1=Chinese)	.025		
Gender (1=Male)	.103***		
Low grade point average	-.113***		
Foreign-born status	-.083**		
No intact family	.062*		
No English at home	-.141	.09***	.09
Step 2: Psychosocial factors			
Subjective well-being	.089***		
Ethnic identification	.005		
Self-esteem	.039		
No sense of fit	-.029	.01	.10
Step 3: Interpersonal factors			
Parent anger at substance use	-.106***		
Peer disapproval of substance use	-.192***	.05***	.15
Step 4: Contextual factors			
School A	-.089**		
School B	-.096**		
Interethnic climate	.11**	.02**	.17

Note. * $p < .10$; ** $p < .05$; *** $p < .01$.

R^2 change (ΔR^2) after each step was statistically significant, with the exception of step 2 (psychosocial factors): step 1 (demographic factors), $\Delta R^2 = .09$, $p < .01$; step 2 (psychosocial factors), $\Delta R^2 = .01$, n.s.; step 3 (interpersonal factors), $\Delta R^2 = .05$, $p < .01$; and step 4 (contextual factors), $\Delta R^2 = .02$, $p < .05$. An examination of individual risk factors in the regression equation showed that experimentation and use among Asian-Americans can be explained by commonly known risk factors such as male gender ($\beta = -.103$, $p < .01$) and poor academic achievement ($\beta = -.113$, $p < .01$).

The marginal significance of not living with both parents as a proxy index of no intact family lent support to the finding that family structure is a less important correlate of substance use than is attachment to parents (e.g., Hawkins et al., 1992). However, contrary to our usual assumption that new immigrant populations experience migration distress because of lack of social and tangible resources (Berry & Kim, 1988), two individual-level risk factors did contribute to the equation, but in the other direction: foreign-born status, $\beta = -.083$, $p < .05$, and English not as a primary language at home, $\beta = -.141$, $p < .01$. This means that foreign-born Asian-American students tended to report less substance use than those who were American-born, and also that the use of English at home is not necessarily a risk factor for substance use.

This pattern of findings suggests at least two interpretations of the patterns found among the "acculturative" indices. First, these demographic factors often used as an index of acculturation may act as buffers or resiliency factors against psychosocial stress and may provide a shield against the volatile norm about drug use that may exist on many school campuses. In other words, these students may not have caught up with the pro-drug message in the campus ecology. Second, Asian adolescents from immigrant families tend to struggle with their language as well as with their academic pursuits, which is likely to promote more conservative attitudes and behaviors with regard to substance experimentation and use. Therefore, in recruiting potential participants for prevention programs, it should be kept in mind that these acculturative factors may not lead to substance use or non-use. Rather, the impact of acculturation clearly needs to be reexamined before we can reliably establish the relationship between acculturation and substance abuse or other related problems (see Sasao & Chang, 1994).

At step 2, although one of the psychosocial factors (an index of subjective well-being) significantly contributed to the equation ($\beta = .089$, $p < .01$), the overall contribution of this risk factor set was minimal, as judged by a ΔR^2 of .01 (n.s.). Surprisingly, the impact of ethnic identification on substance use was not significant ($\beta = .005$, n.s.), although most culturally anchored preven-

tion programs tend to stress the importance of adolescents' identification with their own cultural heritage as an important resiliency factor. Neither of the other psychosocial factors—self-esteem and sense of fit on campus—was significant ($\beta = .039$, n.s., and $\beta = -.029$, n.s., respectively).

The effects of both parental and peer influences at step 3 were consistent with the empirical literature on etiological factors (e.g., Newcomb & Bentler, 1989; Oetting & Beauvais, 1986). Asian-American adolescents in the sample were likely to report less experimentation and use if their parents become angry when they used alcohol or drugs ($\beta = -.106$, $p < .01$). Similarly, strong peer disapproval tended to discourage use ($\beta = -.192$, $p < .01$), again supporting existing empirical evidence (see Newcomb & Bentler, 1989).

In step 4, two dummy variables representing three high schools and an interethnic climate index were entered. The addition of both schools to the regression equation, with school C as the reference school, was significant, indicating that school C appeared to be higher in substance experimentation and use among its student body. Also, a positive effect of interethnic climate index ($\beta = .11$, $p < .01$) showed that the perception of increased tensions among ethnic groups contributed to the higher level of substance experimentation and use among Chinese and Vietnamese students. This was also confirmed in a series of focus group discussions held on each campus prior to the survey; the majority of focus group participants, even Asian-American students who often perceive intergroup conflict as that between Hispanics and other ethnic groups, stressed the importance of intergroup harmony on campus in leading to "fewer problems" (see Sasao, 1994, for a summary of focus group discussions; see Markus & Kitayama, 1991).

Identifying 'At-Risk' Asian-American Adolescents

The findings of this survey also indicate that although Asian-American high school students tend to report less substance use than students of other ethnic-cultural backgrounds, those

identifying and selecting potential Asian-American adolescents who are potential substance users for prevention programs must proceed carefully by considering not only commonly known individual-level risk factors but extra-individual risk factors as well. We know that immigrant adolescents such as Asian-American youths face a number of developmental challenges, as do any other adolescents in the United States, even to the point of engaging in health-compromising behaviors including substance use, violence, and unsafe sexual behaviors. In spite of these concerns and the costs associated with adolescent substance use and abuse, prevention researchers and practitioners have paid insufficient attention to the identification of at-risk individuals for their prevention programs (see Gilchrist, 1991), particularly among underrepresented populations.

The present study has several implications for prevention strategies and evaluation, especially concerning identification and selection of Asian-American adolescents for prevention programs. Specifically, two interrelated issues are discussed here: (1) the difficulty of defining risk for Asian-American adolescents and (2) potential iatrogenic effects of prevention programs among Asian-American adolescents in multiethnic schools.

Difficulty in Defining 'Risk' for Asian-American Adolescents

The ability to predict which adolescents are likely to become alcohol or drug users has been an important concern for prevention practitioners because of the rising costs of prevention efforts in schools and organizations. Although past etiological research indicates that substance use is not a single-pathway problem, but has multiple pathways leading adolescents to experimentation and use (Jessor, 1992), no satisfactory criteria have been established for assessing risk among adolescents or for identifying participants who are likely to benefit most from prevention programs. In the absence of such etiological information, many community-based and school-based preventionists look for idiosyncratic and individualistic factors (e.g., skin color, language, ethnic identification, self-esteem) that conveniently distinguish Asian-American adoles-

cents from "mainstream" students. Thus, all Asian-American adolescents, whether their parents are recent immigrants or not, become eligible for prevention interventions. Given the lack of adequate evaluation in current prevention programs for Asian-Americans, it is extremely difficult to assess the effectiveness of such programs. The situation is further complicated by the fact that some prevention programs in the Asian-American community suffer from inappropriate program content or a mismatch between Asian-American adolescents' needs and program staff's competencies. To enhance the identification of Asian-American adolescents for prevention interventions, research efforts must be expended to develop a theoretical framework in which the concept of risk is defined not only in terms of precipitating individual-level factors (e.g., low self-esteem, low identification with own ingroup), but also in terms of the larger ecological contexts (i.e., schools and neighborhoods).

As shown in the regression analysis, in addition to the amount of variance attributable to intraindividual risk factors (such as gender, grade point average, English not as a primary language at home), a significant amount of variance was explained by extraindividual risk factors (e.g., perceived interethnic climate on campus). The social-psychological process in which this macro-level variable relates to actual substance use needs to be further investigated in future research. Also, more attention must be paid to the role of multicultural contexts shared by a number of ethnic-cultural groups. There is a clear need to integrate micro- and macro-level factors in identifying and recruiting potential substance abusers.

Iatrogenic Effects of Prevention Programs Among Asian-American Adolescents

Overlooked iatrogenic effects of prevention interventions, defined as undesirable and unintended consequences (e.g., lowered self-esteem, heightened level of substance use), may play a role for Asian-American youths who participate in prevention programs. Iatrogenic effects are clearly a synergistic function of characteristics of recruited participants and programmatic emphases.

For example, Asian-American adolescents may feel resentful and disappointed after participating in a prevention program for several reasons. The program may incorporate incorrect assumptions about participants' level of English language skills, or it may pay inappropriate attention to cultural values based on a stereotypical understanding of Asian (not Asian-American) cultures. Students may be concerned about being labeled after they have been pulled out of the classroom to participate in a substance abuse prevention program. Therefore, it is important to consider some creative methods of identifying participants and implementing programs to avoid iatrogenic effects resulting from the use of ethnic glosses (Trimble, 1990-91) (i.e., selecting participants because of their ethnicity or race). Such iatrogenic effects may be psychologically devastating in ethnically or culturally heterogeneous campus settings. For Asian-Americans, in the context of the model minority myth, being recruited for a substance abuse prevention intervention may be a publicly stigmatizing experience because of concerns about loss of face (Markus & Kitayama, 1991) within their own Asian-American student groups as well as across other groups on campus. Under these circumstances, we might begin addressing the effects of the interethnic campus climate not only for Asian-Americans, but also for others in the same ecological context. Thus, participants in prevention programs must be "sufficiently at risk" to justify their inclusion in such programs.

Toward an Integrative Framework for Identifying At-Risk Ethnic-Cultural Adolescents for Prevention Interventions

What is the next step toward developing theory-based identification and screening for Asian-American and other ethnic-cultural adolescents in today's multiethnic schools? This section describes a working and generative research model (Sasao & Chang, 1994) that incorporates both individual-level and systems-level variables that may be amenable to community interventions to promote well-being of individuals in multiethnic or multicultural contexts.

The foregoing discussion clearly indicates that to advance our understanding of etiological factors for substance use among adolescents, we must take into account that substance use is a socially and culturally complex issue encompassing both individual and community-level influences; we must go beyond ethnic glosses in examining culture-relevant factors that promote or inhibit substance use. More specifically, future efforts in etiological research must focus on those mediating variables that are modifiable and amenable to prevention interventions while recognizing the possibility of iatrogenic effects.

Figure 5.1 represents a preliminary research model depicting the impact of ethnic-cultural diversity on our quality of life (Sasao & Chang, 1994). It is based on several social and community psychological theories (e.g., Rappaport, 1987; Tajfel & Turner, 1986; Turner, 1987). A basic assumption among cognitively oriented social psychologists (e.g., Fiske & Taylor, 1984) is that we expend a considerable amount of energy categorizing incoming social information. To simplify such a complex task, we tend to rely on heuristic judgments or rules of thumb to form group representations in our minds (e.g., Tversky & Kahneman, 1974). As can be expected, the more clear-cut and concrete our information is, the easier it is for us to form these representations and vice versa. How does this explain the phenomenon of ethnic-cultural diversity? The general notion is that the more homogeneous a population is perceived to be, the more difficult it is for us to form distinct group categorizations or even realize that such categorizations exist within that population. On the other hand, the more heterogeneous a population is perceived to be, the easier it is to discern category memberships within that population. Under conditions of diversity, we have many convenient bits of group-criterion information or "marker variables" at our disposal: skin color, cultural traditions, ethnic food, language, and customs.

Thus, an important social-psychological consequence of ethnic-cultural diversity is the increased salience of group membership among individuals. This heightened awareness of group membership manifests itself across two social-psychological dimensions: at the micro and macro levels.

The *micro* or *individual* level, which constitutes the theoretical backbone of most prevention models (cf. Gilchrist, 1991), involves social-cognitive processes such as intergroup discrimination, perception of outgroup homogeneity, and salience of ethnic identification. Although this individual level accounts for and explains many risk factors, psychological maladjustments and dysfunction, and consequent behaviors, by no means does it provide us with a complete picture of individuals at risk for substance abuse.

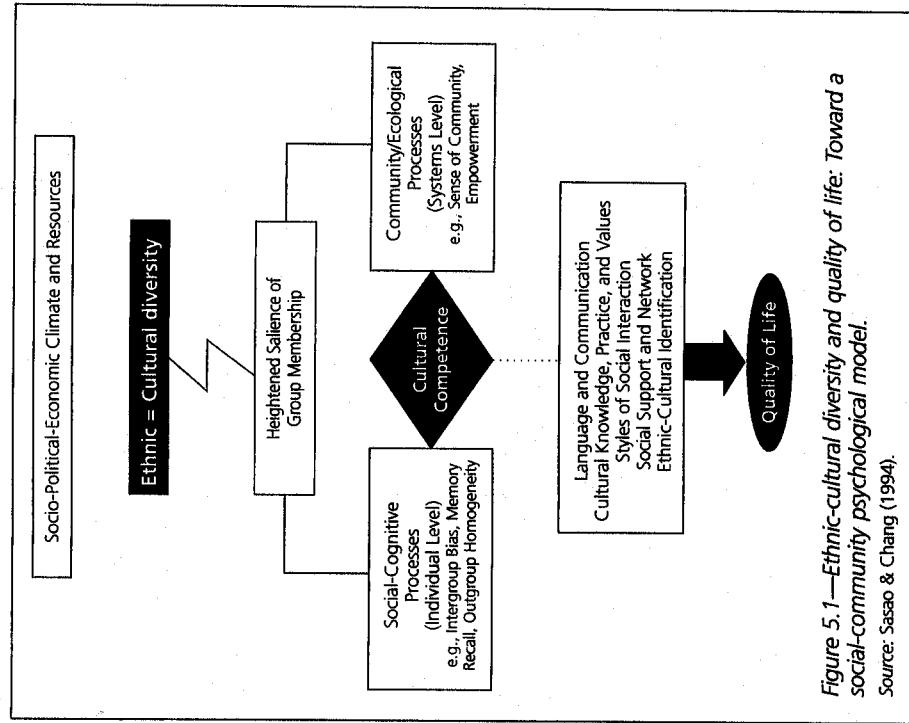


Figure 5.1—Ethnic-cultural diversity and quality of life: Toward a social-community psychological model.
Source: Sasao & Chang (1994).

Inattention by most prevention researchers and practitioners has been at the *macro* or *systems* level. The systems level involves community and ecological processes such as the sense of community, empowerment, and community cohesion. Perhaps part of the reason for inadequate research at the systems level is that this level has been extremely difficult to make operational, both conceptually and methodologically, in research. Paradoxically, this lack of research occurs at a time when we are fast becoming ethnically, culturally, and ideologically diverse, especially in our schools, where children and adolescents spend most of their time during their formative years after immigration.

Clearly, a model that considers only the micro level or only the macro level is inadequate for determining an individual's quality of life or coping ability. To conceptually consider micro- and macro-level influences, we propose the idea of *cultural competence*. We define cultural competence as a set of beliefs, attitudes, values, abilities, and skills that enable individuals to adaptively function in a multicultural environment. The notion of cultural competence accounts for and encompasses interdependence of the individual- and systems-level processes. Although the notion of cultural competence is fairly straightforward under conditions of homogeneity (learn one language, tolerate those who are like yourself, adhere to one set of customs and one culture), conditions of ethnic-cultural heterogeneity greatly complicate the matter. In a multicultural context, the task of becoming culturally competent or proficient is exceedingly complex because we must constantly monitor and adjust our behavior and perceptions depending on the cultural context. Thus, the concept of cultural competence operates not on a single continuum (cultural incompetence at one end and cultural competence at the other), but rather on orthogonal geometry. For instance, one may achieve flawless competence in one culture and stumble in another. It is possible to have varying degrees of proficiency in different cultures.

My colleague and I (Sasao & Chang, 1994) have conceptualized cultural competence as a construct with five dimensions: (1) language and communication; (2) cultural knowledge, practice, and values; (3) styles of social interaction; (4) social support and network; and (5) ethnic-cultural identification. Within each

dimension, there are three domains or levels: affective (emotional), cognitive, and behavioral. We assert that even within one culture, the notion of cultural competence is orthogonal. For instance, an individual may be very proficient linguistically (high behavioral level) and possess a good understanding of cultural practices and values (high cognitive level), yet feel extremely uncomfortable when interacting with other members of the cultural group (low affective level).

We argue that to develop a conceptual understanding of etiological factors for substance use among Asian-American youth, we ought to investigate the intricate social-community psychological processes in which cultural adaptation occurs for these youth in the midst of cultural transition. A psychometric scale assessing the notion of cultural competence, as presented here, is being developed for various Asian-American populations. When the proposed model is applied specifically to substance abuse prevention among Asian-American adolescents in multicultural school settings, it may provide an innovative new intervention strategy. Prevention programs need not be based on traditional "ethnic markers" (e.g., language, skin color) but focus on those variables that could be used in prevention interventions with students of various cultural backgrounds to promote cultural competence skills and opportunities. In the proposed model, substance experimentation and use can be considered as barriers to the development of cultural competence in adolescents.

Conclusions

Identifying at-risk Asian-American adolescents in multiethnic settings is difficult for both prevention researchers and practitioners because the concept of risk has been blurred by our traditional emphasis on individual-level risk factors, including psychosocial and "acculturative" risks, and relative neglect of systems-level or context-dependent factors, such as interethnic climate and school setting. As this chapter attempts to demonstrate, the identification and selection of Asian-American adolescents to participate in substance abuse prevention programs must be determined by a multiplicity of factors incorporating both levels of risk factors.

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Endnotes

1. According to the 1990 U.S. Census, the city of Alhambra had a total population of 82,106. The ethnic breakdown was 40.9 percent White, 36.1 percent Hispanic Origin, 38.1 percent Asian and Pacific Islander, 2.0 percent African American, 0.4 percent American Indian, and 18.6 percent Other Races. The population for the city of San Gabriel was 37,120, with an ethnic composition of 48.1 percent White, 36.3 percent Hispanic Origin, 32.5 percent Asian and Pacific Islander, 1.1 percent African American, 0.5 percent American Indian, and 18.1 percent Other Races. The median income levels for Alhambra and San Gabriel were \$31,368 and \$32,559, respectively.

2. In 1991, school A's student population of 3,302 students was 43.6 percent Asian-American, 44.1 percent Hispanic, 0.1 percent African American, 11.2 percent White, and 0.1 percent Other Races. School B's student population of 2,740 was 63.3 percent Asian-American, 32.2 percent Hispanic, 0.4 percent African American, 4.0 percent White, and 0.1 percent Other Races. Of the 3,564 students at school C, 53.4 percent were Asian-American, 35.1 percent Hispanic, 0.8 percent African American, 10.6 percent White, and 0.1 percent Other Races. 3. Other Asian-American and Pacific Islander groups included 14 Cambodians, 19 Filipinos, 3 Native Hawaiians, 44 Japanese, 19 Koreans, 3 Laotians, 1 Samoan, and 33 Asians of unknown ethnicity.