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Cultural/Interpersonal Values and Smoking in an Ethnically Diverse Sample of Southern California Adolescents

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Abstract: *In ethnically diverse school contexts, values from multiple cultures might influence adolescents' attitudes and behaviors. This study developed scales to assess cultural values among Southern California 6th-grade adolescents (N=2281) and evaluated the associations between values and smoking. The scales assessed values salient in many Hispanic and Asian cultures: Respect for Adults (e.g., filial piety, respeto), Interpersonal Harmony (e.g., saving face, simpatia), and Differentiated Gender Roles (e.g., machismo). In cross-sectional and one-year longitudinal models, Respect for Adults and Interpersonal Harmony were associated with a lower risk of lifetime smoking. The associations were significant even after controlling for demographic characteristics, friends' smoking, and parents' smoking, indicating that values influence adolescents' behavior over and above the effects of modeling and peer influence. Increased understanding of adolescents' values could inform the creation of smoking prevention programs for ethnically diverse adolescents.*

Key Words: *Adolescence, Cultural Values, Smoking, Ethnic Differences, Health Disparities*

CULTURAL / INTERPERSONAL VALUES AND SMOKING IN AN ETHNICALLY DIVERSE SAMPLE OF SOUTHERN CALIFORNIA ADOLESCENTS

Cultural values and belief systems influence the health practices of individuals (McElroy & Jezewski, 2000; Segal, 1976). In a multicultural society, culturally-based values are exchanged among individuals from diverse cultural backgrounds, as well as among individuals within the family. Children and adolescents participate in this exchange of cultural beliefs. As they interact with their peer groups, they bring cultural resources from their families to the diverse adolescent peer culture and bring values from their peers back into their interactions with family members (Corsaro, 1997).

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The ethnic composition of the United States population is transforming rapidly. The two most rapidly-growing ethnic minority groups in the U.S. are Hispanics and Asian-Americans (U.S. Census Bureau, 2001; Lollock, 2001). Thus, an increasing number of adolescents in the United States are coming of age in culturally diverse school and neighborhood contexts. However, the effect of that diversity on their health-related attitudes and behaviors is not known.

CULTURE AND SMOKING AMONG ADOLESCENTS

Despite recent prevention efforts, adolescent smoking remains a significant public health concern in the United States (Centers for Disease Control and Prevention, 2000). Numerous studies have identified risk factors for adolescent smoking, including low socioeconomic status, access to tobacco products, perceptions that tobacco use is normative, smoking by

peers, siblings, and parents, lack of parental involvement and bonding, low academic achievement, inadequate cigarette refusal skills, low self-esteem, high perceived benefits of smoking, and low perceived risks of smoking (Centers for Disease Control and Prevention, 2000).

Adolescent smoking prevalence and patterns of smoking initiation vary across ethnic groups (Centers for Disease Control and Prevention, 2000; Gritz, Prokhorov, Hudmon, Chamberlain, Taylor, DiClemente, Johnston, Hu, & Jones, 1998; Landrine, Richardson, Klonoff, & Flay, 1994; Unger, Palmer, Dent, Rohrbach, & Johnson, 2000; Wiecha, 1996). In the United States, smoking prevalence typically is highest among White and Hispanic adolescents, and lower among African-American and Asian-American adolescents (Centers for Disease Control and Prevention, 2000; Chen & Unger, 1999). Multi-ethnic adolescents, those who endorse two or more ethnicities, also show especially high rates of smoking (Unger et al., 2000). Within each broad racial/ethnic group, smoking behavior varies across subgroups and nationalities; for example, among Asian-American adolescents in California, smoking is most prevalent among Filipino-Americans and least prevalent among Chinese-Americans (Chen & Unger, 1999). Within groups, smoking also varies according to acculturation. Among Hispanic/Latino and Asian/Pacific Islander adolescents, smoking prevalence increases with integration into the U.S. culture, especially among those adolescents who lose or reject ties with the culture of origin (Balcazar, Peterson, & Cobas, 1996; Brook, Whiteman, Balka, Win, & Gursen, 1998; Chen, Unger, Cruz, & Johnson, 1999; Fraser, Piacentini, Van Rossem, Hein, & Rotheram-Borus, 1998; Landrine et al., 1994; O'Hare & Van Tran, 1998; Smith, McGraw, & Carrillo, 1991; Unger et al., 2000; Vega, Gil, & Zimmerman, 1993).

THE ROLE OF CULTURAL VALUES

Adolescents' cultural values might shape their attitudes toward smoking and influence their risk of smoking experimentation. Certain cultures' values might promote attitudes that are protective against adolescent smoking (e.g., strict obedience to parents, not ingesting intoxicating substances, regarding one's body as a sacred gift from God or from one's parents), whereas other cultural values might promote attitudes that increase the risk of smoking (e.g., glamorization of adolescent individualism and rebelliousness, body image ideals of thinness, sanctions against saying no to an offer from a friend or authority figure). In support of that notion, a recent study found that adolescents who held certain culturally-based values such as filial piety were less likely to use cigarettes, alcohol, and marijuana (Unger et al., 2002). Unfortunately, information on the influence of traditional cultural values on adolescent smoking in our ethnically diverse society is sparse. Few measures exist for assessing cultural values among young adolescents. The measures that do exist generally have focused on a single ethnic group or have compared a

single ethnic minority group to Whites (e.g., Kwon-Ahn, 2001; Markham, Featherstone, Taket, Trenchard-Mabere, & Ross, 2001; O'Nell & Mitchell, 1996; Villarruel, 1998; Suarez-Orozco & Suarez-Orozco, 1995; Portes & Rumbaut, 2001).

Cultural Values and Smoking

In complex societies, individuals participate in numerous social contexts and must navigate among a variety of cultural values and messages (McElroy & Jezewski, 2000). Although differing cultures overlap considerably in their values, and a particular cultural value will not characterize every member of that culture, cultural values are general statements about the norms that people in a culture are likely to encounter in their everyday lives (Suarez-Orozco & Suarez-Orozco, 1995). People who share ecological niches and historical experiences typically hold similar values, reinforce those values in their interactions with one another, and socialize their children to hold those values (Roosa, Dumka, Gonzales, & Knight, 2002). Some of the cultural values that might be related to adolescent smoking are summarized below.

Values Regarding Interpersonal Communication and Conflict. The traditionally Hispanic value of *Simpatia* and the traditionally Asian value of *Saving Face* emphasize the importance of harmonious social relationships, including agreeableness, interpersonal harmony, and avoidance of blatant disagreement (Griffith, Joe, Chatham, & Simpson, 1998; Triandis, 1995). Adolescents who endorse those values might have difficulty refusing cigarette offers from friends, and they might feel uncomfortable using the direct, assertive refusal skills taught in many prevention programs.

Values Regarding Adolescents' Interactions with Parents and Other Adults. *Filial piety* is a traditionally Asian value that describes children's obligations to their parents and ancestors, including obeying parents, providing for parents' well-being, avoiding harm to their own bodies, ensuring continuity of the family line, and honoring the family name (Ho, 1994). Adolescents who endorse that value might avoid smoking because they feel obliged to obey their parents, and because they believe that it is disrespectful to their parents to pollute their own bodies with unhealthy substances. However, filial piety also might be a risk factor for smoking; if a parent offers an adolescent a cigarette during a celebration or special occasion, the adolescent might feel that it is impolite to refuse the offer.

Respeto is a Hispanic value that emphasizes formal roles and their status differentials, including respect for people in positions of authority and status, e.g., doctors, teachers, grandparents, and community elders (Garcia, 1996). Adolescents who place a high value on respeto might honor the advice about smoking from authority figures, such as parents, teachers, doctors, or television news anchor-people. Therefore, they might

be especially likely to heed health warnings about the dangers of smoking, and they might be less susceptible to peer influences. However, if the adults they respect are smokers, they might smoke to imitate those adults.

Values Regarding Gender Role Differentiation. Many cultures prescribe differentiated roles for men and women. For example, *Machismo*, the Hispanic term for the male gender role, emphasizes traits and behaviors that are sex-typed as "masculine," such as male dominance, sexual prowess, and physical strength (Cuellar, Arnold, & Gonzalez, 1995; Neff, Prihoda, & Hoppe, 1991). In addition to its negative connotation of womanizing, false bravado, and subjugation of women, machismo also includes positive traits such as the obligation to protect one's family. Differentiated gender roles usually prescribe more instrumental, agentic, and autonomous roles for men, while prescribing more expressive, relational, and reactive roles for women (Spence, 1993; Bem, 1974). Risky behaviors such as smoking are consistent with the traditionally masculine role but inconsistent with the traditionally feminine role. Therefore, girls who believe in differentiated gender roles might be less likely to smoke because they believe that smoking is unfeminine and unacceptable to the males in their social networks, whereas boys who endorse gender role differentiation might smoke to prove their masculinity.

The research on adolescents' cultural values in a diverse society, and their associations with health risk behaviors, is sparse. A pilot study of 211 high school students (Unger, Ritt-Olson, Teran, Huang, Hoffman, & Palmer, 2002) found that filial piety decreased the risk of substance use, and endorsement of differentiated gender roles increased the risk of substance use among boys but decreased the risk among girls. Another study (Evans & Turner, 1990) found that egalitarian gender role beliefs were protective against smoking among boys and girls.

More information is needed about the cultural values of adolescents in the diverse U.S. culture. Adolescents living in ethnically diverse areas of the U.S. are likely to encounter influences from numerous cultures in addition to their own cultures of origin. Because adolescents are so strongly influenced by their peers (Harris, 1995), it is likely that they will incorporate some of those values into their own belief systems during their process of identity development. Although values might have different names and might be expressed differently across cultures, some cross-cultural similarities are evident, such as respecting parents and authority figures (e.g., filial piety, respeto) and maintaining interpersonal harmony (e.g., saving face, simpatia). When adolescents from a variety of cultural backgrounds come together in a multicultural environment, it is not known how they incorporate and/or combine those values, and how the values influence their behavior.

This study investigated the associations between cultural values and smoking in an ethnically diverse sample of Southern California 6th-grade students, of whom the majority were Hispanic or Asian-American. Based on reviews of the literature, consultation with cultural experts, and pilot testing, scales were developed to measure values traditionally associated with Hispanic and Asian cultures. The associations between the values scales and lifetime smoking were examined.

METHODS
Sample
The data described in this article are from a study of smoking in an ethnically diverse, urban sample of Southern California 6th-grade students. The purpose of this survey was to assess psychosocial and cultural risk factors for smoking among ethnically diverse adolescents, with the goal of using that knowledge to create culturally-tailored smoking prevention curricula.

School Selection. Because the study focuses on the two largest immigrant ethnic groups to the U.S. (Hispanics and Asians), the sample selection procedure was designed to select schools with large proportions of Hispanic and Asian students. Data from the California Board of Education and the Roman Catholic Archdiocese of Los Angeles and Orange Counties were used to identify school districts with ethnically diverse student populations. A total of 32 public school districts and 2 Catholic Archdiocese were invited to participate in a smoking prevention study. Of those, 12 school districts and both Archdiocese agreed to participate. Within those districts, 24 middle schools were selected; selection was based on the ethnic diversity of the student populations, the school administrators' willingness to participate, and logistical concerns such as travel distance from the research institute and schools' schedules.

Student Recruitment. All 6th-grade students in the participating schools were invited to participate in the study. Consent forms were sent home to the parents/guardians of all 6th-grade students. If a parent provided active written consent, the child was invited to participate in the study. Of the 4422 students invited to participate, 3362 (76%) provided active parental consent. Of those students, 172 (5%) did not complete the survey because they were absent from school on the day of data collection or chose not to participate. Of the remaining 3190 students who participated in the baseline survey, 2281 (72%) provided complete data on all variables in this analysis. The cross-sectional data reported here are from the 2281 students with complete baseline data. A follow-up survey was conducted one year later, when the respondents were in 7th grade. Of the 2281 students who provided complete baseline data, 1940 (85%) provided data on their smoking behavior in 7th grade.

Procedure
Students completed a paper-and-pencil survey in their classrooms during a single class period (45-50 minutes). Trained data collectors, who were not previously acquainted with the students, distributed the surveys. The surveys were identified only by a code number, not

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with the students' names or any other identifying information.

Measures
Smoking. Lifetime smoking was used as the outcome variable. Students were asked, "Have you ever tried cigarette smoking, even a few puffs?" Response options were "yes" and "no."

Cultural/Interpersonal Values. Based on reviews of the literature, we selected values that have been associated with specific cultures (e.g., respeto, filial piety, simpatia, saving face, machismo). Next, we generated questionnaire items to assess those constructs among young adolescents. Some items were modified or simplified from existing adult scales (e.g., Cuellar et al., 1995; Ho, 1994). For most of the values, existing scales either were not available or were not relevant to young adolescents. A group of researchers and cultural experts, including a psychometrician, a developmental psychologist, a health behavior researcher, a health psychologist, several health educators, and an advisory panel of cultural experts, generated characteristics of those cultural values and possible questionnaire items to measure them. Items were evaluated in four consecutive pilot studies (total N=2682 6th-grade students from schools that were similar in demographic characteristics to the schools in the trial). After each pilot study, the frequency distributions and Cronbach's alphas were examined, and data collectors' reports were used to identify items that were difficult for students to understand. Items with highly skewed distributions were either eliminated or re-worded. Based on the results of the pilot studies, scales and items were altered. Simpatia and Saving Face originally were two separate scales, but they were combined because they were intercorrelated highly in the pilot studies. The same was true for Filial Piety and Respeto. The final set of items consisted of 15 items (7 representing Respect for Adults, 4 representing Interpersonal Harmony, and 4 representing Differentiated Gender Roles). To confirm the construct validity, the team of cultural experts confirmed that the selected items were representative of the underlying cultural values they were intended to measure. The items and their factor loadings are described in detail in the Results section and in Table 2.

Covariates. Demographic covariates included age, gender, ethnicity, acculturation, socioeconomic status, grades in school, friends' smoking, and parents' smoking. Ethnicity was assessed with a series of dichotomous questions (e.g., "Are you Black or African-American? Yes/no" "Are you Latino or Hispanic? Yes/no." Students were classified as African-American, Asian/Pacific Islander, Latino/Hispanic, White, or Other. Students who selected two or more of those ethnic categories were classified as Multi-ethnic. Acculturation was assessed with the AHIMSA Acculturation Scale (Unger et al., 2002), an 8-item acculturation measure for ethnically diverse adolescent populations with questions

assessing favorite foods, friends, customs, holidays, and mass media preferences. Socioeconomic status was the number of rooms in the student's home divided by the number of residents in the home. Grades in school was the student's self-reported grade point average, which ranged from 0=F to 4=A. Friends' smoking was the number of the student's close friends who had ever tried smoking, rated on a 4-point scale from "none" to "all." Parents' smoking was the number of the two primary adults in the student's life who smoked, rated on a 3-point scale from "none" to "2."

Data Analysis
Derivation of Cultural/Interpersonal Values Scales. Cronbach's alpha was used to determine the internal consistency reliability of each hypothesized cultural value scale. Scale scores were computed by taking the mean of all items in each scale.

Comparison of the Cross-Sectional and Longitudinal Samples. Chi-square and t-tests were used to determine whether the longitudinal sample (the students with complete data in 6th and 7th grade) differed significantly in demographic characteristics from the cross-sectional sample (the students with complete data in 6th grade but not in 7th grade).

Demographic Variation in Values Scores. Multiple regression analyses were conducted to determine whether scores on the values scales varied according to the students' demographic characteristics.

Associations Between Values and Smoking. Multiple logistic regression models were used to evaluate the associations between the values scales and lifetime smoking. A cross-sectional model included all 2281 students who provided complete data in 6th grade. A longitudinal model included the 1940 students who provided complete data in 6th and 7th grade. Both models controlled for the covariates described above. Odds ratios and 95% confidence intervals were computed.

To determine whether the associations between values and smoking were consistent across ethnic groups, we calculated interaction terms for each value X ethnic group combination, after centering the variables. The logistic regression model was run again, allowing those interaction terms to step into the model after the main effects in a forward selection procedure. To minimize the chance of Type I errors due to multiple tests (12 interaction terms were tested), a Bonferroni adjustment was used to set the significance level for entry into the model at $p<.004$ (.05 divided by 12).

RESULTS
Of the 2281 students who provided complete data in 6th grade (the cross-sectional sample), 1940 also provided data on their smoking behavior in 7th grade (the longitudinal sample). Table 1 shows the demographic characteristics of the cross-sectional and longitudinal

Table 1. Demographic Characteristics

	Entire baseline sample (N=2281)	Cross-sectional data only (N=341)	Longitudinal data (N=1940)	Test for difference between cross-sectional sample and longitudinal sample
Age (mean)	11.3	11.3	11.3	T=0.63
Percent female	54	53	54	Chi-square=0.03
Percent Hispanic	63	70	62	Chi-square=7.37*
Percent Asian	33	25	34	Chi-square=10.32*
Percent African-American	4	4	3	Chi-square=0.94
Percent White	25	23	25	Chi-square=0.84
Acculturation score (mean AHIMSA U.S. orientation, ranges from 0 to 8)	3.66	3.78	3.64	T=1.03
Socioeconomic status (mean number of rooms to people in home)	1.12	1.04	1.13	T=2.25*
Grades in school (mean, ranges from 0=F to 4=A)	3.17	2.96	3.20	T=4.48*
Lifetime smoking prevalence at baseline (%)	8	10	8	Chi-square=1.40

Note. The total of the ethnicity percentages is greater than 100% because respondents were allowed to select multiple ethnic groups.

Table 2. Factor loadings of values scales

Item	Factor 1: Respect for Adults	Factor 2: Traditional gender roles	Factor 3: Interpersonal harmony
It is important to do everything that your parents tell you to do.	.72	.05	-.06
I must always respect my parents, even if I don't agree with them.	.71	.01	.02
I want to be a good person so that people know that my parents raised me right.	.69	-.05	.01
Young people should always show respect for older people.	.67	.01	.07
You should always do what an adult tells you to do.	.51	.19	.01
It is important to honor my parents.	.51	.15	.04
I always try to listen to my teacher's suggestions.	.37	.06	.32
The father is the boss of the family.	-.07	.83	.04
The father should make the final decisions in the family.	.01	.81	.01
A husband should make more money than his wife does.	-.05	.74	-.05
It is a father's job to protect the family.	.11	.64	-.03
I try not to say things that make other people feel bad.	-.11	-.05	.80
I hate to see someone else get embarrassed.	-.03	-.01	.70
I try not to get into an argument, even if someone makes me really mad.	.06	.05	.67
It is wrong to make fun of police officers and security guards.	.14	-.02	.51
Eigenvalue	3.67	2.21	1.36
Cronbach's alpha	.76	.76	.62

samples. Compared with the students with data at both timepoints, the students who provided data only in 6th grade were more likely to be Hispanic and less likely to be Asian, and had lower socioeconomic status and grades in school. Lifetime smoking did not differ significantly across the two groups.

Factor Structure of the Values Scales

Table 2 shows the items comprising the values scales, their factor loadings, their eigenvalues, and their Cronbach's alphas. The Cronbach's alphas were .76 for Respect for Adults, .62 for Interpersonal Harmony, and .76 for Differentiated Gender Roles.

Demographic Variation in Values Scores

As shown in Table 3, ethnicity and other demographic variables were associated significantly with the values scales. Respect for Adults and Interpersonal harmony were associated inversely with age. Interpersonal harmony was higher among girls than among boys, whereas boys endorsed Differentiated Gender Roles more than girls did. Relative to non-Hispanics, Hispanic students had lower Interpersonal Harmony scores and higher endorsement of Differentiated Gender Roles. Relative to non-Asians, Asian students had higher Interpersonal harmony scores. Respect for Adults was associated inversely with socioeconomic status and associated positively with grades in school. Differentiated

Table 3. Demographic characteristics associated with values scales

	Respect for Adults		Interpersonal Harmony		Differentiated Gender	
	Beta	p-value	Beta	p-value	Beta	p-value
Age	-0.101	.0001	-0.069	.0007	-0.014	.5008
Female	0.037	.0779	0.143	.0001	-0.166	.0001
Asian	-0.051	.0826	0.004	.8973	0.069	.0152
White	-0.023	.2984	0.017	.4389	0.023	.2828
African-American	0.009	.6517	-0.009	.6725	-0.022	.2813
Hispanic	0.042	.1474	-0.108	.0002	0.086	.0027
U.S. Orientation acculturation	-0.020	.3680	-0.002	.9394	-0.019	.3639
SES	-0.092	.0001	0.003	.9014	-0.174	.0001
Grades in school	0.073	.0008	0.107	.0001	-0.062	.0038

Gender Roles were associated inversely with socioeconomic status and grades in school.

Associations Between Values and Lifetime Smoking

In the 6th grade survey, 8% of the students had tried smoking. In the 7th grade survey, 14% of the students had tried smoking. Table 4 shows the results of the logistic regression analysis predicting lifetime smoking at 6th grade and 7th grade. In the cross-sectional model, controlling for age, sex, ethnicity, acculturation, SES,

grades in school, friends' smoking, and parents' smoking, Respect for Adults (OR=0.57 [0.38,0.86]) and Interpersonal Harmony (OR=0.74 [0.57,0.95]) were associated with a lower risk of lifetime smoking. Similar results were found in the longitudinal model (Respect for Adults OR=0.60 [0.42,0.87], Interpersonal Harmony OR=0.76 [0.64,0.96]).

Interactions Between Values and Ethnicity

To determine whether the associations between values and smoking were consistent across ethnic groups, interaction terms were created for each value X ethnicity combination and allowed to step into the model after the main effects in a forward selection procedure. Because the multiple tests might increase the likelihood of Type I errors (3 values X 4 ethnicity dummy codes = 12 interaction terms), the Bonferroni procedure was used to set the criterion for entry into the model at p<.004 (.05 divided by 12) (Miller, 1981). None of the value X ethnicity interaction terms were significant under this criterion.

DISCUSSION

The cultural values that are salient in many Hispanic and Asian cultures have been documented extensively. However, little has been published about adolescents' experience of those values. In a multicultural context such as an ethnically diverse school or neighborhood, where many adolescents are immigrants from Hispanic or Asian cultures or are children of immigrants, values from multiple cultures might exist simultaneously and influence adolescents' attitudes and behaviors. As adolescents interact with their ethnically diverse peer

Table 4. Associations between cultural values and smoking

	Cross-sectional (N=2281)		Longitudinal (N=1940)	
	Odds Ratio	95% C.I.	Odds Ratio	95% C.I.
Age	1.28	(0.94, 1.74)	1.15	(0.89, 1.49)
Female	0.78	(0.54, 1.12)	0.82	(0.62, 1.09)
Asian	0.71	(0.41, 1.22)	0.69	(0.45, 1.05)
White	0.82	(0.53, 1.27)	1.03	(0.74, 1.43)
African-American	1.35	(0.58, 3.13)	0.98	(0.47, 2.02)
Hispanic	**1.72**	**(0.98, 3.01)**	1.91	(1.23, 2.97)
U.S. Orientation acculturation	0.98	(0.81, 1.05)	0.96	(0.90, 1.02)
SES	1.10	(0.85, 1.42)	1.00	(0.81, 1.24)
Grades in school	0.98	(0.81, 1.19)	0.85	(0.72, 1.00)
Friends' smoking	3.89	(3.09, 4.90)	3.42	(2.74, 4.28)
Parents' smoking	1.65	(1.29, 2.11)	1.43	(1.16, 1.76)
Respect for Adults	0.57	(0.38, 0.86)	0.60	(0.42, 0.87)
Interpersonal harmony	0.74	(0.57, 0.95)	0.76	(0.64, 0.96)
Differentiated Gender Roles	1.05	(0.84, 1.30)	1.05	(0.89, 1.25)

95% Confidence intervals that do not include 1 are significant at p<.05.

groups, they might bring to their peers the values that they originally learned within the family context (Corsaro, 1997). Because the schools selected for this study were comprised of an Asian/Hispanic majority, the cultural values salient in Hispanic and Asian families might have pervaded the school environments and therefore would be evident among many of the students in the schools, regardless of their ethnicity.

This study developed scales to assess some of the values identified in the literature as salient among the native cultures of many immigrants to the United States. In an ethnically diverse sample of 6th grade students in Southern California, values from multiple cultures clustered into broad categories: Respect for Adults (e.g., filial piety, respeto), Interpersonal Harmony (e.g., saving face, simpatia), and Differentiated Gender Roles (e.g., machismo). Moreover, it appears that adolescents' agreement or disagreement with those values is associated with their likelihood of health risk behaviors such as smoking. In cross-sectional and longitudinal models, adolescents who endorsed Respect for Adults or Interpersonal Harmony were at a lower risk of smoking, relative to their peers who did not hold those values. This finding indicates that adolescents vary in their agreement with the traditional values of certain cultures of origin, and that some of those values might be protective against smoking and other risk behaviors. The associations between the values and smoking were significant even after controlling for demographic characteristics, friends' smoking, and parents' smoking, indicating that the values influence adolescents' behavior over and above the effects of modeling and peer influence.

Of course, these results do not prove that the values are cultural in origin. Respect for Adults did not vary significantly among ethnic groups in this sample, indicating either that this value is not a "cultural" value or, alternatively, that multiple cultures include the value of respect for adults. Consistent with the notion of a "cultural" value, Differentiated Gender Roles was highest among Hispanics and Asians, the two major immigrant cultures to the United States. Interpersonal Harmony, which included aspects of the Asian value of saving face and the Hispanic value of simpatia, was higher among non-Hispanics than among Hispanics, but was not significantly associated with Asian ethnicity. In addition to the ethnic variation in the values, sex variation also was observed; relative to boys, girls agreed more with the value of Interpersonal Harmony and less with the value of Differentiated Gender Roles. This indicates that the distinct cultures of adolescent girls and adolescent boys might hold different values. Because the values in this study varied according to sex and other demographic characteristics in addition to ethnicity, one might argue that the values are adolescent interpersonal values rather than cultural values per se.

Although the values scales were developed to represent the values that are salient in many Hispanic and Asian cultures, they might be general interpersonal values rather than cultural values. Basic interpersonal values, although given different names and expressed differently across cultures, have shown cross-cultural similarity in many studies. A study of college students in 54 nations (Schwartz & Bardi, 2001) found that the hierarchical order of values is relatively consistent across cultures, with benevolence, self-direction, and universalism values ranked most important; power, tradition, and stimulation values ranked least important; and security, conformity, achievement, and hedonism in between. Cross-cultural studies of moral development have found core values that are shared across groups (Finkel, Harre, & Lopez, 2001; Kohlberg & Gilligan, 1971). Further cross-cultural research of adolescents is needed to determine whether adolescent interpersonal values are similar across cultures.

It is possible that our measures did not adequately capture the values we intended to assess. Because validated scales did not exist to measure cultural values among ethnically diverse young adolescents, we created new scales for this research. The scales developed in this study have adequate internal consistency reliability, and they were judged to have good content and face validity by a panel of cultural experts. However, the test-retest reliability, inter-rater reliability, concurrent validity, and predictive validity remain unknown. To determine whether the hypothesized values truly are rooted in traditional cultures, it might be informative to assess those values among people living within the cultures of origin (e.g., Mexican adolescents living in Mexico, Asian adolescents living in Asia).

The process of ethnic identity formation is complex and gradual (Phinney, 1998). In 6th grade, adolescents still are in the early stages of examining and defining their ethnic self-identity and its implications. Perhaps the internalization of cultural values, like ethnic self-identity, occurs gradually throughout adolescence and young adulthood. The internalization of cultural values might occur after contact with a wider variety of social contexts, after comparing the values of one's own family with those of others. Young adolescents might not have a full awareness of their comfort with certain social norms and might experiment with differing self-perceptions, social roles, and behaviors as they develop their self-identify. Therefore, perhaps they are still in the early stages of the process of defining their cultural values as distinct from, or similar to, those of their family and friends.

Most of the respondents in this sample were U.S. natives, and those who were born outside the U.S. had immigrated to the U.S. before 6th grade. Therefore, they might not perceive especially strong ties to their families' cultures of origin. Much of the cultural information they receive about their culture is secondhand (i.e. stories told by parents or grandparents), making it similar in salience to the information about other cultures that they receive from their peers. Because adolescents spend so much time with same-age peers, the cultural

information learned by adolescents in diverse peer groups is likely to be a mix of influences from multiple cultures. Because the reference point for adolescents' social comparisons is other adolescents rather than adults (Harris, 1995), and because adolescents collectively construct an autonomous culture (Corsaro, 1997), the opinions and behaviors of the diverse peer group might be more influential than those of adult relatives and neighbors.

LIMITATIONS

The results are based on adolescents' self-reports, which might be biased. This sample is limited to those students whose parents provided active written consent. Students from less acculturated families might have been less likely to obtain parental consent and therefore might have been underrepresented in this sample. The survey was administered only in English. Because California laws mandate English-only instruction in the public schools, all students in public school classrooms are assumed to have a basic level of English proficiency and are taught in English. Our anecdotal evidence has indicated that students in those classrooms who are less English proficient are reluctant to stigmatize themselves, so even when presented with the option of completing a survey in another language, they typically choose the English version. In addition, our pilot research showed that 6th grade students with low English reading proficiency typically did not have better reading proficiency in their native language.

IMPLICATIONS

This study provides information about the values held by adolescents in a multiethnic society and their associations with smoking behavior. Respect for Adults and Interpersonal harmony were associated with a lower risk of smoking, cross-sectionally and longitudinally, across ethnic groups. Those values might be associated with a lower risk of other problem behaviors, as well, such as alcohol use, other drug use, violence, and crime. Those values are consistent with theoretical models of problem behavior (e.g., Jessor & Jessor, 1997; Catalano & Hawkins, 1996), which posit that bonding to conventional social structures and endorsement of their norms is protective against problem behaviors. To prevent smoking and other health risk behaviors, it might be possible to identify adolescents who have not incorporated those protective values, identify the life circumstances that caused them not to endorse those values, and help them to learn effective coping strategies as alternatives to engaging in health-compromising behaviors.

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