

Family- and Peer-Related Risk and Protective Factors for Tobacco Use Among American Indian Adolescents in California

Jennifer B. Unger, PhD
Lourdes Baezconde-Garbanati, PhD
Claradina Soto, MPH

ABSTRACT. American Indian adolescents have the highest smoking prevalence of all ethnic groups in the U.S., yet few representative, population-based studies have examined their risk and protective factors for smoking. This study used combined data from statewide samples of California adolescents in 1999 and 2002. The prevalence of lifetime and past-month cigarette smoking was higher among American Indian adolescents than among non-Indians. American Indian adolescents were more likely than non-Indian adolescents to have friends or parents who smoke. They were less likely to say that their parents had expressed a desire for them not to smoke, to have a complete smoking ban in the home, to believe that occasional smoking is harmful, and to believe that smoking helps keep weight down. Among the American Indian adolescents, the risk factors for lifetime smoking were friends' smoking, parents' smoking, no smoking ban in the home, and the belief that occasional smoking is

Jennifer B. Unger, Lourdes Baezconde-Garbanati, and Claradina Soto are all affiliated with the Institute for Health Promotion and Disease Prevention Research, University of Southern California Keck School of Medicine.

Address correspondence to: Jennifer B. Unger, PhD, USC Institute for Prevention Research, 1000 S. Fremont, Box 8, Alhambra, CA 91803 (E-mail: unger@usc.edu).

This research was supported by the California Tobacco-Related Disease Research Program (grant #12RT-0253).

Journal of Ethnicity in Substance Abuse, Vol. 3(4) 2004
Available online at <http://www.haworthpress.com/web/JESA>
© 2004 by The Haworth Press, Inc. All rights reserved.
Digital Object Identifier: 10.1300/J233v03n04_01

not harmful. The risk factors for past-month smoking were friends' smoking and the belief that occasional smoking is not harmful. Continued health education efforts are needed throughout American Indian communities to prevent nicotine dependence among adolescents. Some promising strategies include encouraging American Indian parents to implement home smoking bans, countering peer influences, and reinforcing the message that even occasional smoking is harmful. However, smoking prevention in American Indian communities should be conducted in a culturally appropriate manner, recognizing the important role of sacred tobacco in American Indian cultures. [Article copies available for a fee from The Haworth Document Delivery Service: 1-800-HAWORTH. E-mail address: <docdelivery@haworthpress.com> Website: <<http://www.HaworthPress.com>> © 2004 by The Haworth Press, Inc. All rights reserved.]

KEYWORDS. American Indian, adolescent, substance abuse, smoking

National surveys have highlighted the public health problem of tobacco use among American Indian adolescents. Nationwide, in 2002, 31% of American Indian adolescents ages 12-17 reported smoking in the past month, as compared with 18% of Whites, 12% of Hispanics, 9% of African-Americans, and 4% of Asian-Americans (SAMHSA, 2004). Unfortunately, most representative population-based studies have not had sufficient sample sizes to report smoking prevalence among American Indian adolescents as a separate group. Therefore, specific analyses of American Indian adolescents have been omitted from many tobacco surveillance reports (CDC, 2004a; Johnston, O'Malley, Bachman, & Schulenberg, 2004). Studies of non-representative convenience samples of American Indian adolescents on and off reservations in multiple states also have reported a high prevalence of tobacco use (CDC, 2003; Davis, Lambert, Cunningham-Sabo & Skipper, 1995; Hollis, Polen, Lichtenstein & Whitlock, 2003; LeMaster, Connell, Mitchell & Manson, 2002). However, these studies are limited to specific geographic areas (typically rural areas with low socioeconomic status) and may not be generalizable to other areas.

PSYCHOSOCIAL RISK FACTORS FOR SMOKING AMONG AMERICAN INDIAN ADOLESCENTS

Many possible reasons for the elevated risk of tobacco use among American Indian adolescents have been hypothesized, including peer

influences, parental influences, easier access to tobacco, perceptions of positive effects of tobacco, stressful life experiences, and the traditional role of sacred tobacco in ceremonies (Kegler, Cleaver & Yazzie-Valencia, 2000; LeMaster et al., 2002; Schinke, Moncher, Holden, Botvin, & Orlandi, 1989; Schinke, Tepavac, & Cole, 2000). In the general population of adolescents, peer influence is the strongest determinant of smoking behavior (Conrad, Flay & Hill, 1992). If American Indian adolescents have more peers who use tobacco, relative to adolescents of other ethnic groups, they might receive more social reinforcement for using tobacco. In one study (Schinke et al., 1989), American Indian adolescents were more likely than other adolescents to say that most or all of their friends smoked, and they were least likely to believe that smoking would lead to social disapproval. Therefore, we hypothesized that relative to other ethnic groups, American Indian adolescents would be more likely to have friends who smoke, and that friends' smoking would be a risk factor for the adolescents' own smoking behavior.

Because smoking is prevalent among American Indian adults as well as among adolescents (Denny, Holtzman & Cobb, 2003), American Indian adolescents are likely to have parents or other adult family members who smoke. Parents who smoke may serve as role models of smoking behavior, and adolescents with smoking parents may have easier access to cigarettes in the home. Parents who smoke also may be less likely to implement smoking bans in the home (Norman, Ribisl, Howard-Pitney, Howard, & Unger, 2000), thereby making smoking more convenient and conveying the message that smoking is acceptable. In addition, parents who smoke may be less effective at communicating their desire for their children not to smoke, because their children may perceive them as hypocritical. Studies have shown that American Indian parents do express anti-smoking messages to their children (Kegler et al., 2000), but little is known about how their children interpret their messages. Studies have reported that some American Indian parents do not forbid their children from using tobacco, because they believe that their children can make their own decisions and will use it anyway (American Indian Tobacco Education Network, 2000; Kegler & Malcoe, 2004). Also, if they want to convey their cultural history and traditions to their children, parents might be reluctant to convey strong anti-tobacco messages to their children, fearing that the children also might reject the historical sacred use of tobacco (Cheshire, 2001). Therefore, we hypothesized that relative to other ethnic groups, American Indian adolescents would be more likely to have parents who smoke, that they would be more likely to report that their parents do not disapprove of their smoking,

and that these parental factors would be associated with the adolescents' smoking behavior.

Perceived consequences of tobacco use. Tobacco plays an important role within many American Indian cultures. Traditionally, native tobacco is gathered or grown and used during ceremonies. Native tobacco is considered a healing herb within some American Indian communities (Elferink, 1983; Hughes, 2003). Many ceremonies do not require the tobacco to be smoked or ingested; it can be burned as an offering in the open air or given intact as an offering or gift. When it is smoked, it is intended to be smoked on special occasions, rather than on a daily basis (American Indian Tobacco Education Network, 2000; Elferink, 1983). This practice could convey the idea to adolescents that occasional tobacco use is not harmful. Many modern-day Indians have adopted commercial tobacco products such as packaged cigarettes as a convenient substitute for the homegrown tobacco that has been used in their culture for thousands of years. Because tobacco is known for its healing properties in many traditional American Indian cultures (Hughes, 2003), American Indian adolescents might interpret warnings about the health dangers of tobacco as contradictory or unreliable (Harris, Harris & Davis, 1991; Shorty, 1997). If they are presented with anti-tobacco messages that portray all uses of all forms of tobacco as bad, they might consider those messages irrelevant to their unique sociocultural context. We therefore hypothesized that relative to other ethnic groups, American Indian adolescents would be less likely to believe in the negative health consequences of occasional tobacco use, and that the belief that occasional tobacco use is not harmful would be a risk factor for tobacco use.

This study used data from the 1999 and 2002 California Tobacco Survey (CTS) to assess the risk and protective factors for tobacco use among statewide samples of American Indian adolescents in California. We first compared American Indian adolescents with adolescents of other ethnic groups to determine whether American Indian adolescents had higher levels of risk factors and lower levels of protective factors. We then examined these risk and protective factors as predictors of tobacco use among the American Indian adolescents in the sample.

METHODS

Data Source

Data were obtained from the 1999 and 2002 California Tobacco Surveys (Gilpin, Pierce, Berry & White, 2000, 2003). The two years of data

were combined to obtain a large enough sample of American Indian adolescents to conduct meaningful statistical analyses, similar to the method used by Johnston et al. (2004). The California Tobacco Surveys (CTS) are large population-based random-digit-dialed surveys designed to monitor changes in tobacco use and attitudes in California. The sampling and data collection methods are described in detail elsewhere (Gilpin et al., 2000, 2003). Every three years, a representative sample of California households is selected. Within those households, adolescents between 12 and 17 years of age are invited to participate in the youth survey. The CTS conducted 6090 adolescent interviews in 1999 and 5,857 adolescent interviews in 2002.

Classification of race/ethnicity. Respondents were included in this analysis if they could be classified as American Indian or non-Indian, and if they provided complete data on all variables of interest. Because the race/ethnicity questions were asked differently in the 1999 and 2002 surveys, some recoding was done to make the samples comparable. In both the 1999 and 2002 surveys, respondents were first asked whether they were of Hispanic ethnicity. All respondents, whether Hispanic or non-Hispanic, were then asked to indicate their race. In the 1999 survey, respondents were asked to select one of eight racial categories: White, Black, Japanese, Chinese, Filipino, Korean, Other Asian or Pacific Islander, or American Indian or Alaska Native. In the 2002 survey, the same racial categories were presented, but the respondents were allowed to select more than one category. For purposes of this analysis, the following coding scheme was used: In both samples, all respondents who selected "American Indian or Alaska Native" were classified as American Indian, regardless of whether or not they also self-identified as Hispanic, non-Hispanic, and/or White. However, in the 2002 survey, some respondents selected American Indian or Alaska Native along with Black ($N = 17$) or an Asian/Pacific Islander group ($N = 5$). These respondents were excluded from this analysis, because it is not clear which racial category they would have chosen if they had been required to choose only one.

Selection of comparison group. California does not have a predominant ethnic majority group (U.S. Census Bureau, 2003). The population of adolescents 10-19 years of age is projected to be 39% Non-Hispanic White, 41% Hispanic, 12% Asian/Pacific Islander, 7% African-American, and 0.5% American Indian (Myers & Pitkin, 2001). Therefore, it is inappropriate to pick one group arbitrarily and use it as a reference group for comparisons. In addition, numerous other studies (CDC, 2004b; Ellickson, Orlando, Tucker & Klein, 2004; Kandel, Kiros, Schaffran &

Hu, 2004; Khoury, Warheit, Zimmerman, Vega & Gil, 1996; Unger, Palmer, Dent, Rohrbach, & Johnson, 2000; Wallace, Bachman, O'Malley, Johnston, Schulenberg & Cooper, 2002) already have reported variation in tobacco-related behaviors and attitudes across numerous racial and ethnic groups, so that effort is not repeated here. In this study, we elected to combine the non-Indian groups into a single reference group. This analysis focuses on the risk and protective factors that distinguish American Indian adolescents from non-Indian adolescents.

Measures

Friends' smoking. Friends' smoking was assessed with two questions: "Of your four best male friends, how many of them smoke?" and "Of your four best female friends, how many of them smoke?" Both questions were rated on a 5-point scale ranging from 0 to 4. Because these variables were not normally distributed, they were recoded as 0 vs. 1 or more.

Parents' smoking. Parents' smoking was assessed with the question, "Do any of your parents, step-parents, or guardians now smoke cigarettes?" (rated yes or no).

Home smoking ban. Respondents were asked whether there were smoking rules or restrictions in their households. The response options were, "Smoking is completely prohibited for everyone," "Smoking is generally prohibited for everyone," "Smoking is allowed for adults in some rooms only," "Only youths are prohibited from smoking," or "There are no restrictions on smoking." Because only a complete indoor smoking ban will prevent exposure to secondhand smoke in the home, responses were coded as 1 = complete smoking ban or 0 = any other response.

Perceived consequences of tobacco use were assessed with the following 7 items, with response options of "yes" or "no": "It's safe to smoke for only a year or two," "There isn't any harm in having an occasional cigarette," "Smoking can help people when they are bored," "Cigarette smoking helps people relax," "Cigarette smoking helps reduce stress," "Smoking helps people feel more comfortable at parties and in other social situations," and "Smoking helps people keep their weight down."

Data Analysis

Chi-square analyses were used to compare the age and gender distributions of the American Indian and non-Indian groups. To control for

possible secular trends in tobacco-related attitudes and behaviors, all analyses also controlled for the year of the survey (1999 = 0, 2002 = 1). The variables that differed significantly between American Indian and non-Indian adolescents were selected for inclusion in models evaluating the association between psychosocial and tobacco use among American Indian adolescents. In the sample of American Indian respondents, multiple logistic regression analyses were conducted to identify the risk and protective factors for tobacco use, controlling for the influence of the other risk and protective factors. These analyses also were controlled for age, gender, and year of the survey.

RESULTS

Of the 11,922 adolescents who completed the 1999 or 2002 survey and were 12-17 years of age, 107 (0.9%) were excluded from this analysis: 85 because they did not provide any race/ethnicity data, 17 because they selected both American Indian and African-American and 5 because they selected both American Indian and Asian. Of the 11,815 adolescents whose ethnicity could be classified as American Indian or non-Indian, 10,660 (90%) provided complete data on all variables of interest in this analysis.

Table 1 shows the demographic characteristics of the sample. The age and gender distributions of the American Indian and non-Indian groups were similar, but the American Indian group was slightly overrepresented by 12-15-year-old adolescents and slightly underrepresented by 16-17-year-old adolescents. The gender distributions did not vary significantly across the two groups. As shown in the table, 67% of the American Indian adolescents also self-identified as Hispanic, and 97 of the American Indian adolescents (19% of the combined sample, and 35% of the 277 2002 respondents who had the opportunity to select multiple racial categories) also self-identified as White.

Tobacco Use Prevalence

Table 2 shows ethnic differences in tobacco use. Lifetime smoking and past-month smoking were significantly more prevalent among American Indian adolescents than among non-Indians. Lifetime use of > 100 cigarettes and lifetime smokeless tobacco use did not differ significantly between American Indians and non-Indians.

TABLE 1. Demographic Characteristics of Analytic Sample

	American Indian (n = 513)	Non-Indian (n = 10134)	Chi-square
Age (years)			9.54*
12-13	192 (37%)	3385 (33%)	
14-15	185 (36%)	3404 (34%)	
16-17	136 (27%)	3345 (33%)	
Gender			1.72
Male	272 (53%)	5072 (50%)	
Female	241 (47%)	5062 (50%)	
Race / ethnicity ^a			
American Indian	513 (100%)	0	
White	97 (19%)	6300 (62%)	
African-American	0 ^b	753 (7%)	
Hispanic	347 (67%)	3344 (33%)	
Asian / Pacific Islander	0 ^b	1056 (10%)	

*p < .05

^aThe sum of the percentages is greater than 100% because respondents in the 2002 survey were allowed to select multiple categories. Respondents in the 1999 survey were allowed to select a race category (e.g., White, African-American, Asian/Pacific Islander, American Indian) in addition to Hispanic ethnicity, but they were not allowed to select multiple race categories.

^bRespondents in the 2002 survey who selected American Indian + White or American Indian + Hispanic were coded as American Indian. Respondents who selected American Indian + African-American or American Indian + Asian were deleted from the analytic sample because it was not possible to make their data comparable to the 1999 data (see Methods section for details).

Psychosocial Risk and Protective Factors

Table 3 compares psychosocial risk and protective factors between American Indians and non-Indians. Compared with non-Indians, American Indians were more likely to have friends who smoked and to have parents who smoked. They were significantly less likely to say that their parents had expressed a desire for them not to smoke, to have a complete smoking ban in the home, to believe that smoking occasionally is harmful, and to believe that smoking helps keep weight down.

The psychosocial variables that were significant in Table 3 were retained for inclusion in the multiple logistic regression models predicting tobacco use among American Indians. The results of this analysis are shown in Table 4. All odds ratios are controlled for age, gender, and year of the survey. In the Bivariate columns of Table 4, the odds ratios are controlled for age, gender, and year of the survey only. In the

TABLE 2. Tobacco Use Among American Indian and Non-Indian Adolescents

	American Indian	Non-Indian	Odds Ratio (adjusted for age, gender, and year of survey)	95% Confidence Interval
Lifetime smoking	19.9%	17.2%	1.47*	(1.16, 1.88)
Past-month smoking	9.9%	7.1%	1.78*	(1.30, 2.43)
> 100 cigarettes in lifetime	4.5%	4.2%	1.30	(0.83, 2.03)
Lifetime smokeless/ chew tobacco	4.3%	3.3%	1.46	(0.92, 2.31)

*p < .05

TABLE 3. Psychosocial Risk and Protective Factors Among American Indian and Non-Indian Adolescents

	American Indian	Non-Indian	Odds ratio (adjusted for age, gender, and year of survey)	95% Confidence Interval
<u>Peer and parental norms</u>				
Any friends smoke	47.4%	43.1%	1.45*	(1.19, 1.77)
Parent(s) smoke	34.5%	29.6%	1.27*	(1.05, 1.53)
When older, parents won't mind smoking	17.2%	14.9%	1.22	(0.96, 1.55)
Parents expressed desire for you not to smoke	84.4%	88.9%	0.65*	(0.51, 0.84)
Complete smoking ban in house	59.3	63.9	0.81*	(0.68, 0.97)
<u>Perceived consequences</u>				
Any harm in smoking occasionally	69.0%	75.1%	0.73*	(0.60, 0.88)
Safe to smoke for a year or two	7.8%	8.4%	0.91	(0.65, 1.26)
Smoking helps when bored	16.6%	18.3%	0.91	(0.72, 1.16)
Smoking helps relax	30.4%	31.7%	0.97	(0.80, 1.18)
Smoking helps reduce stress	30.2%	27.2%	1.20	(0.99, 1.46)
Smoking helps feel comfortable at parties	38.2%	37.8%	1.04	(0.87, 1.26)
Smoking helps keep weight down	11.9%	16.5%	0.70*	(0.54, 0.93)

*p < .05

Multivariate columns, the odds ratios are controlled for these covariates and all other psychosocial variables in the model.

For lifetime smoking, friends' and parents' smoking were risk factors in the bivariate model. Having a complete smoking ban in the household and believing that occasional smoking is harmful were pro-

TABLE 4. Correlates of Past-Month Smoking Among American Indian Adolescents (N = 513)

	Lifetime smoking				Past-month smoking			
	Bivariate		Multivariate		Bivariate		Multivariate	
	OR	95% CI	OR	95% CI	OR	95% CI	OR	95% CI
Any friends smoke	5.92*	3.33,10.50	5.16*	2.86,9.32	24.78*	5.90,104.12	21.34*	5.04,90.30
Parent(s) smoke	2.39*	1.48,3.84	1.76*	1.03,3.00	1.87*	1.02,3.45	1.33	0.67,2.63
Parents expressed desire for you not to smoke	0.91	0.50,1.69	1.13	0.58,2.20	1.12	0.49,2.57	1.43	0.59,3.44
No-smoking policy in household	0.45*	0.28,0.71	0.57*	0.34,0.97	0.48*	0.26,0.88	0.57	0.29,1.14
Any harm in smoking occasionally	0.33*	0.21,0.54	0.37*	0.22,0.62	0.34*	0.18,0.63	0.41*	0.21,0.80
Smoking helps keep weight down	1.26	0.66,2.43	1.13	0.55,2.32	1.63	0.74,3.58	1.48	0.62,3.53

*p < .05

protective factors against lifetime smoking. These risk and protective factors remained significant after controlling for the other variables in the model.

For past-month smoking, friends' smoking and parents' smoking were risk factors in the bivariate model, but only friends' smoking remained significant after controlling for the other variables. Similarly, a complete smoking ban in the household and believing that occasional smoking is harmful were protective factors, but only believing that occasional smoking is harmful remained significant after controlling for the other variables in the model.

DISCUSSION

Public health efforts are needed to reduce tobacco-related morbidity and mortality among American Indian adolescents (American Indian Tobacco Education Network, 2000). In this sample of adolescents in California, as in previous studies (CDC, 2003, 2004b; Unger, Shakib, Cruz, Hoffman, Pitney & Rohrbach, 2003), American Indian adolescents were significantly more likely than non-Indians to have tried smoking and to have smoked in the past month. Adding to the results of previous research, this study also identified tobacco-related risk and protective factors that are more prevalent among American Indian ado-

lescents than among non-Indians. American Indian adolescents were more likely than non-Indians to have smokers in their social networks, including their friends and parents. This indicates that American Indian adolescents may have more role models for smoking and more opportunities to experiment with smoking. In addition, American Indian adolescents were less likely than non-Indians to report protective family-related factors, such as reporting that their parents expressed a desire for them not to smoke and reporting that their homes had complete smoking bans. This suggests that American Indian families may have more lenient attitudes toward smoking. Qualitative data (Unger et al., in press) has suggested that many American Indian parents consider tobacco use to be a minor problem compared to the use of alcohol and other drugs, so they are more lenient about tobacco use and stricter about prohibiting other substances.

American Indian adolescents also were less likely than non-Indians to believe that occasional smoking is harmful. In part, this may reflect the occasional sacred tobacco use in tribal ceremonies. Tobacco has been used ceremonially by many American Indian tribes for thousands of years (Hughes, 2003), and it would not be culturally appropriate to recommend changing these important cultural traditions. However, when used for traditional ceremonial purposes, tobacco is used only on special occasions, and it is often used in ways that do not involve inhaling tobacco smoke, such as offering it intact, scattering it in the wind, or burning it in the open air (Hughes, 2003). These cultural practices can be observed without exposing adolescents to the harmful effects of smoking tobacco. Furthermore, it is important to draw a distinction between recreational use of commercial tobacco (e.g., cigarettes, packaged smokeless tobacco) and ceremonial use of sacred homegrown tobacco. This distinction may have become blurred for modern-day American Indian adolescents, because tribal groups sometimes use commercial tobacco in ceremonies when homegrown tobacco is not readily available (Unger et al., in press), and commercial tobacco products are marketed with American Indian names and images to suggest that they are more “natural” than other commercially-produced brands. Further research is needed to gain a more complete understanding of the role of ceremonial tobacco use in the lives of modern-day American Indian adolescents.

Culturally appropriate health education interventions are needed to teach American Indian adolescents that tobacco smoking is unhealthy even in small amounts, and to develop culturally-acceptable ways to

minimize exposure to inhaled tobacco smoke and secondhand smoke during ceremonies and tribal events.

Limitations

Because the CTS was not originally designed to focus on American Indian adolescents, it did not include questions specific to the unique tobacco-related issues relevant to American Indians. For example, it did not ask specifically about the adolescents' use of tobacco in ceremonies or their beliefs about the healing properties of tobacco. Furthermore, it did not ask whether the tobacco used was in the form of commercial cigarettes or packaged smokeless tobacco, or whether it was homegrown. Further research is needed to understand the various ways that homegrown and commercial tobacco is currently used by various American Indian groups, and how those diverse ceremonial uses influence adolescents' perceived norms and opinions about tobacco.

These data are based on adolescents' self-reports. Although adolescents' self-reports of tobacco use generally are quite accurate under confidential survey conditions (Bauman & Ennett, 1994), it is not known whether there are ethnic differences in adolescents' perceptions and self-reports of other psychosocial constructs such as perceived norms and access.

This study focused on American Indian adolescents in California. Because the indigenous populations throughout North America are heterogeneous, it is not known whether these results would generalize to American Indian adolescents in other areas. Although some similarities exist across tribal groups, there also is a large amount of cultural variation (Fleming, 1992). Studies of adults (Hodge et al., 1995) have found significant variation across tribes even within California in tobacco use prevalence. These differences might be rooted in tribal cultures; tribes vary in their specific ceremonies involving tobacco, including who is allowed to use the tobacco and how they use it. More research is needed to understand how tobacco is used by various tribal groups.

The results of this analysis suggest that tobacco use is a significant public health problem among American Indian adolescents in California. Some potential strategies for reducing tobacco-related disease among American Indians include encouraging parents to implement and enforce smoking bans in the home, and reinforcing the message that any inhalation of tobacco smoke is harmful. Continued efforts are needed to develop culturally-appropriate ways to convey these messages.

REFERENCES

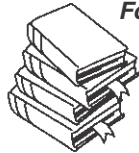
- American Indian Tobacco Education Network. (2000). *The American Indian Tobacco Education Network, 2000: Campaign reports addressing the areas of cessation services, countering pro-tobacco influences, social source access to commercial tobacco, and environmental tobacco smoke*. Sacramento, CA: American Indian Tobacco Education Network.
- Bauman, K.E., & Ennett, S.E. (1994). Tobacco use by black and white adolescents: The validity of self-reports. *Am J Public Health, 84*(3), 394-398.
- CDC. (2003). Tobacco, alcohol, and other drug use among high school students in Bureau of Indian Affairs-funded schools—United States, 2001. *MMWR Morb Mortal Wkly Rep, 52*(44), 1070-1072.
- CDC. (2004a). Youth Risk Behavior Surveillance—United States, 2003. *Morbidity & Mortality Weekly Report, 53*(SS-2)(1-29).
- CDC. (2004b). Prevalence of cigarette use among 14 racial/ethnic populations—United States, 1999-2001. *MMWR Morb Mortal Wkly Rep, 53*(3), 49-52.
- Cheshire, T.C. (2001). Cultural transmission in urban American Indian families. *American Behavioral Scientist, 44*(9), 1528-1535.
- Conrad, K.M., Flay, B.R., & Hill, D. (1992). Why children start smoking cigarettes: Predictors of onset. *Br J Addict, 87*(12), 1711-1724.
- Davis, S.M., Lambert, L.C., Cunningham-Sabo, L., & Skipper, B.J. (1995). Tobacco use: Baseline results from pathways to health, a school-based project for southwestern American Indian youth. *Prev Med, 24*(5), 454-460.
- Denny, C.H., Holtzman, D., & Cobb, N. (2003). Surveillance for health behaviors of American Indians and Alaska Natives. Findings from the Behavioral Risk Factor Surveillance System, 1997-2000. *MMWR Surveill Summ, 52*(7), 1-13.
- Elferink, J.G. (1983). The narcotic and hallucinogenic use of tobacco in Pre-Columbian Central America. *J Ethnopharmacol, 7*(1), 111-122.
- Ellickson, P.L., Orlando, M., Tucker, J.S., & Klein, D.J. (2004). From adolescence to young adulthood: Racial/ethnic disparities in smoking. *Am J Public Health, 94*(2), 293-299.
- Fleming, C. (1992). American Indians and Alaska natives: Changing societies past and present. In M. Orlandi (Ed.), *Cultural competence for evaluations: A guide for alcohol and other drug prevention practitioners working with ethnic/racial communities* (pp. 147-171). Rockville, MD: Office of Substance Abuse Prevention.
- Gilpin, E.A., Pierce, J.P., Berry, C.C., & White, M.M. (2000). *Technical report on analytic methods and approaches used in the 1999 California Tobacco Survey analysis. Vol 1: Data Collection Methodology*. La Jolla, CA: University of California, San Diego.
- Gilpin, E.A., Pierce, J.P., Berry, C.C., & White, M.M. (2003). *Technical Report on Analytic methods and Approaches Used in the 2003 California Tobacco Survey Analysis. Vol 1: Data Collection Methodology*. La Jolla, CA: University of California, San Diego.
- Harris, M.B., Harris, R.J., & Davis, S.M. (1991). Ethnic and gender differences in Southwestern students' sources of information about health. *Health Education Research, 6*(31-42).

- Hodge, F.S., Cummings, S., Fredericks, L., Kipnis, P., Williams, M., & Teehee, K. (1995). Prevalence of smoking among adult American Indian clinic users in northern California. *Prev Med*, 24(5), 441-446.
- Hollis, J.F., Polen, M.R., Lichtenstein, E., & Whitlock, E.P. (2003). Tobacco use patterns and attitudes among teens being seen for routine primary care. *Am J Health Promot*, 17(4), 231-239.
- Hughes, J. (2003). *Learning to smoke: Tobacco Use in the West*. Chicago: University of Chicago Press.
- Johnston, L.D., O'Malley, P.M., Bachman, J.G., & Schulenberg, J.E. (2004). *Monitoring the Future national results on adolescent drug use: Overview of key findings, 2003* (NIH Publication No. 04-5506). Bethesda, MD: National Institute on Drug Abuse.
- Kandel, D.B., Kiros, G.E., Schaffran, C., & Hu, M.C. (2004). Racial/ethnic differences in cigarette smoking initiation and progression to daily smoking: A multilevel analysis. *Am J Public Health*, 94(1), 128-135.
- Kegler, M.C., Cleaver, V.L., & Yazzie-Valencia, M. (2000). An exploration of the influence of family on cigarette smoking among American Indian adolescents. *Health Educ Res*, 15(5), 547-557.
- Kegler, M.C., & Malcoe, L.H. (2004). Anti-smoking socialization beliefs among rural Native American and White parents of young children. *Health Educ Res*.
- Khoury, E.L., Warheit, G.J., Zimmerman, R.S., Vega, W.A., & Gil, A.G. (1996). Gender and ethnic differences in the prevalence of alcohol, cigarette, and illicit drug use over time in a cohort of young Hispanic adolescents in south Florida. *Women & Health*, 24(1), 21-40.
- LeMaster, P.L., Connell, C.M., Mitchell, C.M., & Manson, S.M. (2002). Tobacco use among American Indian adolescents: Protective and risk factors. *J Adolesc Health*, 30(6), 426-432.
- Myers, D., & Pitkin, J. (2001). *Demographic Futures for California*. Los Angeles: University of Southern California Population Dynamics Group.
- Norman, G.J., Ribisl, K.M., Howard-Pitney, B., Howard, K.A., & Unger, J.B. (2000). The relationship between home smoking bans and exposure to state tobacco control efforts and smoking behaviors. *American Journal of Health Promotion*, 15(2), 81-88.
- SAMHSA. (2004). *National Survey on Drug Use and Health, 2002*. Rockville, MD: Substance Abuse and Mental Health Services Administration.
- Schinke, S.P., Moncher, M.S., Holden, G.W., Botvin, G.J., & Orlandi, M.A. (1989). American Indian youth and substance abuse: Tobacco use problems, risk factors and prevention interventions. *Health Education Research*, 4(1), 137-144.
- Schinke, S.P., Tepavac, L., & Cole, K.C. (2000). Preventing substance use among Native American youth: Three-year results. *Addict Behav*, 25(3), 387-397.
- Shorty, L. (1997). Tionantati: Native Tobacco People. *Winds of Change*, 12, 68-70.
- Unger, J.B., Palmer, P.H., Dent, C.W., Rohrbach, L.A., & Johnson, C.A. (2000). Ethnic differences in adolescent smoking prevalence in California: Are multi-ethnic youth at higher risk? *Tobacco Control*, 9, Supplement 2, ii9-ii14.

- Unger, J.B., Shakib, S., Cruz, T.B., Hoffman, B.R., Pitney, B.H., & Rohrbach, L.A. (2003). Smoking behavior among urban and rural Native American adolescents in California. *Am J Prev Med*, 25(3), 251-254.
- Unger, J.B., Soto, C., Rodriguez, Y., & Baezconde-Garbanati, L. Perceptions of Ceremonial and Non-Ceremonial Uses of Tobacco by American Indian Adolescents in California. *Journal of Adolescent Health* (in press).
- U.S. Census Bureau. (2003). *Statistical Abstract of the United States: 2003 (123rd Edition)*. Washington, DC: U.S. Census Bureau.
- Wallace, J.M., Jr., Bachman, J.G., O'Malley, P.M., Johnston, L.D., Schulenberg, J.E., & Cooper, S.M. (2002). Tobacco, alcohol, and illicit drug use: Racial and ethnic differences among U.S. high school seniors, 1976-2000. *Public Health Rep*, 117 Suppl 1, S67-75.

SUBMITTED: 06/15/04

ACCEPTED: 10/20/04



For FACULTY/PROFESSIONALS with journal subscription recommendation authority for their institutional library . . .

If you have read a reprint or photocopy of this article, would you like to make sure that your library also subscribes to this journal? If you have the authority to recommend subscriptions to your library, we will send you a free complete (print edition) sample copy for review with your librarian.

1. Fill out the form below and make sure that you type or write out clearly both the name of the journal and your own name and address. Or send your request via e-mail to dcdelivery@haworthpress.com including in the subject line "Sample Copy Request" and the title of this journal.
2. Make sure to include your name and complete postal mailing address as well as your institutional/agency library name in the text of your e-mail.

[Please note: we cannot mail specific journal samples, such as the issue in which a specific article appears. Sample issues are provided with the hope that you might review a possible subscription/e-subscription with your institution's librarian. There is no charge for an institution/campus-wide electronic subscription concurrent with the archival print edition subscription.]

☐ **YES!** Please send me a complimentary sample of this journal:

(please write complete journal title here—do not leave blank)

I will show this journal to our institutional or agency library for a possible subscription.

Institution/Agency Library: _____

Name: _____

Institution: _____

Address: _____

City: _____ State: _____ Zip: _____

Return to: Sample Copy Department, The Haworth Press, Inc.,
10 Alice Street, Binghamton, NY 13904-1580