

Cigarette Smoking among San Francisco Hispanics: The Role of Acculturation and Gender

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Abstract: We conducted a phone survey of 1,669 San Francisco Hispanics ages 15 to 64 years. The age-adjusted overall smoking prevalence was 25.4 per cent (95% CI = 23.3, 27.5) with more men (32.4 per cent) smoking than women (16.8 per cent). Age-adjusted smoking rates were higher among the less acculturated males (37.5 vs 26.7 per cent) and among the more acculturated females (22.6 vs 13.6 per cent). The more acculturated, however, smoked a greater number of cigarettes per day independent of gender. Community-based smoking cessation interventions, adapted to local conditions, may have a greater potential for success among Hispanics. (*Am J Public Health* 1989; 79:196-199.)

Introduction

Most studies on cigarette smoking among Hispanics indicate that although the overall prevalence is lower than the rates for non-Hispanics Whites, Hispanic men smoke more than Hispanic women.¹⁻⁷ The level of acculturation to the mainstream US culture may play a significant role in influencing cigarette smoking behavior. However, the relationship between acculturation and smoking prevalence remains unclear, in part due to the fact that instruments used to measure acculturation have usually been plagued by serious psychometric shortcomings.⁸ The southwest portion of the Hispanic Health and Nutrition Examination Survey (HHANES)* showed that 28 per cent of women scoring in the upper tertile of an acculturation scale reported current smoking, compared to 19 per cent of those scoring in the lower tertile of acculturation. Among the men sampled in the HHANES, the level of acculturation was not consistently related to cigarette smoking. In contrast, a recent study among a representative sample of older Mexican Americans and of their relatives residing in San Antonio, Texas showed that acculturation was not related to prevalence of smoking.³

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To evaluate the role of acculturation in cigarette smoking behavior, we conducted a phone survey of a representative sample of Hispanics in San Francisco.

Methods

Respondents were sampled using Waksberg's⁹ method for random digit dialing from the 27 census tracts in San Francisco with 10 per cent or more Hispanic residents. These tracts represented 66.6 per cent (N = 55,541) of all Hispanics (N = 83,373) living in the city of San Francisco according to the 1980 census.¹⁰ Participants were given a choice of answering the interview in either English or Spanish; 67 per cent preferred to be interviewed in Spanish. The refusal rate (proportion of eligible respondents contacted who declined to be interviewed) was only 4.7 per cent. Hispanic ethnicity was defined by self-identification.

The interview schedule asked about current and past smoking behavior, awareness of smoking cessation programs, standard sociodemographic items, and a five-item acculturation scale developed by Marin and colleagues which has shown excellent reliability and validity.⁸

Data were analyzed using standard techniques. Age-adjusted rates were calculated by direct standardization method¹¹ using the 1980 Hispanic population in San Francisco as reference.

Results

A total of 1,669 Hispanics, between 15 and 64 years of age, were interviewed by telephone between October 1986 and March 1987. The respondents' had a mean age of 35.5 years (SD = 12.06), an average of 11.6 years of education and had lived in the United States a mean of 14.2 years; 69.5 per cent were born in Latin America. Interviewed Hispanics were of Mexican (36.4 per cent), Central American (46.9 per cent), South American (6.1 per cent), or Caribbean (10.6 per cent) background.

A total of 735 (44 per cent) respondents (95% confidence intervals = 41.6, 46.4) reported smoking at least 100 cigarettes in their lives. The overall age-adjusted prevalence of current smoking (Table 1) was 25.4 per cent (95% CI = 23.3, 27.5) but only 16.8 per cent (95% CI = 15.6, 18.0) of the women compared to 32.4 per cent (95% CI = 29.4, 35.4) of the men were currently smoking. Less acculturated men had a higher age-adjusted smoking rate than the more acculturated (37.5 vs 26.7 per cent), while the reverse relation held with women (13.6 vs 22.6 per cent).

The more highly acculturated Hispanic smokers reported smoking an average of 13.3 cigarettes per day compared to 8.6 cigarettes per day among the less acculturated and waiting an average of over 90 minutes less than those with

TABLE 1—Smoking Behavior among San Francisco Hispanics, Ages 15 to 64 Years

	Total N	Current Smokers*		Former Smokers		Never Smokers	
		N	%	N	%	N	%
Total	1669	406	25.4	329	19.7	934	56
Men	731	245	32.4	192	26.3	294	40.2
Low Acculturation	435	167	37.5	106	24.4	162	37.2
High Acculturation	295	78	26.7	86	29.2	131	44.4
Women	938	161	16.8	137	14.6	640	68.2
Low Acculturation	623	88	13.6	78	12.5	457	73.4
High Acculturation	313	72	22.6	59	18.8	182	58.1

Total per cents may not add up to 100 due to rounding.

*Rates for current smoking are age-adjusted using the 1980 Hispanic population in San Francisco as reference.

lower levels of acculturation before lighting their first cigarette of the day (Table 2).

The less acculturated respondents tended to report quitting plans to a greater extent than the more acculturated (Table 3). For example, the mean number of quit attempts reported for the 12 months prior to the interview was 2.0 for the less acculturated compared to 1.4 for the more acculturated. Less acculturated male smokers also reported 22 more days without smoking in the previous year, but among women there was virtually no difference. The highly acculturated felt more certain than the less acculturated about how to obtain information dealing with smoking cessation and about where to join a cessation group. However, all Hispanic smokers interviewed reported having heard information on the health dangers of smoking in a similar proportion.

Discussion

The results of this survey of San Francisco Hispanics are consistent with other published reports that have shown marked differences in smoking prevalence due to the gender and acculturation level of the respondents.¹⁻⁷ Our data also indicate a lower smoking prevalence than found in regional surveys^{3,6,*} completed several years ago. This may actually represent a trend toward decreasing smoking prevalence

TABLE 2—Smoking Behavior of Current Smokers by Gender and Acculturation

(N)	Men (N = 245)		Women (N = 161)		Total (N = 406)	
	Acculturation Low (167)	High (78)	Acculturation Low (88)	High (72)	Acculturation Low (255)	High (150)
Mean number of cigarettes smoked/day	8.6	15.6	6.8	10.8	8.0	13.3
Mean age started smoking	16.7	16.6	21.1	17.2	18.2	16.9
% Inhaling deeply into chest	48	68	30	54	42	61
% burning all cigarette	38	35	15	35	31	35
Average wait (min) to first cigarette upon waking	272	178	328	219	291	198

Note: All percentages rounded to nearest whole number.

TABLE 3—Quitting Behavior and Awareness of Cessation Services among Current Smokers by Gender and Acculturation

(N)	Men (N = 245)		Women (N = 161)		Total (N = 406)	
	Acculturation Low (167)	High (78)	Acculturation Low (88)	High (72)	Acculturation Low (255)	High (150)
Plan to change smoking patterns next year	71%	62%	85%	54%	75%	58%
Mean number of quit attempts last year	2.0	1.4	2.1	1.4	2.0	1.4
Mean number of days without smoking last year	62.9	39.1	46.8	50.1	57.5	44.0
% Knows of printed cessation information	26	57	39	65	31	61
% Knows of cessation group	14	49	15	46	14	48
% Heard/Read information on health hazards	81	73	80	70	81	71

Note: Percentages rounded to nearest whole number.

among Hispanics since our rates (32.4 per cent for men and 16.8 per cent for women) are similar to those reported for Hispanics in the 1985 National Health Interview Survey⁷ (31 per cent and 21 per cent, respectively).

However, several limitations of this study must be considered. First, although the majority of San Francisco Hispanics live in the area included in the survey, the sample may not be representative due to the 66.6 per cent coverage. Second, deception in self-reporting cigarette smoking behavior has been reported among New Mexico Hispanics,¹² and thus the low smoking prevalence found here may be an underestimate. Third, Hispanics in San Francisco live in a strong anti-smoking environment and thus may be influenced to an extent that limits generalizability to Hispanics in other areas. Finally, the acculturation scale applied is a unidimensional measure of a complex phenomenon that is otherwise difficult and tedious to evaluate.

Despite these limitations, the observed differences in prevalence and smoking behavior by the respondents' level of acculturation are consistent with the concept that as individuals adapt to a new culture their attitudes and behaviors also change.¹³ These data indicate that the influence of acculturation on smoking prevalence and behaviors varies by gender. Our observation that increased acculturation among men results in decreased smoking, and that the opposite effect is seen among women, may reflect current social norms for smoking in the United States. In addition, the number of cigarettes smoked per day and other smoking behaviors of the more acculturated Hispanics resemble those of non-Hispanic White smokers.

Future prevention and cessation programs directed at Hispanics will need to consider the influence of acculturation on the prevalence and smoking behaviors of prospective clients. In addition, the less acculturated, primarily Spanish-speaking Hispanic seems to be in greater need of information and services. A majority of Hispanics report being light smokers^{1,3,*} implying that less intense cessation methods may be expected to have a greater impact among them. Thus large-scale community programs utilizing Spanish-language mass media with information on the dangers of smoking and including simple

cessation techniques that smokers with low levels of addiction can utilize to quit smoking need to be a priority. The need to target the less acculturated Hispanic men, as the subgroup with the highest prevalence, is a challenge to program planners who will need to deal with stereotyped beliefs regarding smoking among the members of this group.¹⁴

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Evidence for Limits on the Acceptability of Lowest-Tar Cigarettes

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Abstract: The sales of the lowest yield cigarettes (1-3 mg tar) seem to have been particularly resistant to the effects of promotion and advertising, while the sales of other low-yield cigarettes (4-9 mg tar) seem to have been increased by promotional efforts. This finding is consistent with the existence of a boundary of tar and nicotine acceptability below which consumers in general are not prepared to go. Use of lower tar cigarettes may be helpful for those who cannot stop smoking, but, since 1979, the percentage of cigarettes under 16 mg tar has changed little. (*Am J Public Health* 1989; 79:198-199.)

Introduction

There may be limits to consumer acceptability of the lowest-yield cigarettes.^{1,2} Although these cigarettes have been promoted (sometimes as less hazardous), they have attracted few customers.² From information provided by the cigarette industry, the United States Federal Trade Commission (FTC) has reported the promotional costs and sales of cigarettes as a function of tar yield categories for the years 1979 to 1986^{3,4} (see Table 1). The relation between promotional costs and sales is least ambiguous when promotional costs are increasing: Other things being equal, greater promotion should be reflected in greater sales. When promotional costs drop, brand loyalty and other habitual pressures can account for much of the repeat purchasing. I therefore

assessed the relation between promotion and sales for the three consecutive years in which promotional costs were increasing (1979 through 1981) for each of the three lowest-yield categories of low-tar cigarettes.

Method

Advertising and promotional expenditures include advertising in newspapers, magazines, paperback books, outdoor billboards, transit posters, and at point of sale, as well as promotional allowances, sampling and other distribution, sponsorship of special events, and costs relating to discount coupons.^{3,4} A linear regression was calculated between the percentage of the advertising and promotional budget and the percentage of sales (market share) for each of three tar yield categories (3 mg tar or less, 4-6 mg tar, and 7-9 mg tar). The

TABLE 1—Percentage of Promotional/Advertising (Adv) Costs and Sales for Cigarettes in Three Categories of Tar Yield and Total Adv Costs and Sales from 1979 to 1986

Year	1-3 mg Tar		4-6 mg Tar		7-9 mg Tar		Totals	
	Adv	Sales	Adv	Sales	Adv	Sales	Adv (in millions)	Sales (in billions)
	%	%	%	%	%	%	%	\$
1979	9.6	2.7	9.3	3.1	12.0	4.8	1,083	621.8
1980	15.1	3.3	9.9	4.0	14.7	9.5	1,242	628.2
1981	15.7	3.7	11.5	5.9	19.5	15.0	1,548	636.5
1982	5.7	2.9	9.9	6.0	25.8	18.9	1,794	632.5
1983	4.2	3.1	11.5	6.3	19.4	18.5	1,901	603.6
1984	4.3	2.9	8.0	6.5	21.1	16.9	2,095	608.4
1985	3.1	2.3	6.4	6.1	20.6	16.9	2,476	599.3
1986	3.8	2.6	7.7	7.3	14.6	12.4	2,382	586.4

SOURCE: US Federal Trade Commission Reports to Congress^{3,4}

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