Title

Public attitudes about cigarette smoking: Results from the 1990 Smoking Activity

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Public Attitudes about Cigarette Smoking: Results from the 1990 Smoking Activity Volunteer Executed Survey

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Thomas O'Rourke, PhD, MPH, University of Illinois at Urbana-Champaign, conducted an evaluation of the pilot study; Robert Brackbill, PhD, MPH, Office of Surveillance and Analysis, National Center for Chronic Disease Prevention and Health Promotion, advised on epidemiologic and statistical issues related to sampling; Lawrence Garfinkel, MA, (retired), Vice President, Epidemiology and Statistics, ACS, and Clark Heath, Jr., MD, Vice President, Epidemiology and Statistics, ACS, provided institutional and funding support for the Smoking Activity Volunteer Executed Survey (SAVES) project; Stephen Gambescia, MEd, CHES, pretested the SAVES instruments and procedures in Philadelphia; and ACS volunteers conducted the telephone interviews for the pilot study.

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Synopsis

The 1990 Smoking Activity Volunteer Executed Survey collected information on a wide range of policy-relevant issues concerning public attitudes about cigarette smoking. These issues include cigarette taxes, advertising restrictions, minors' access to tobacco products, school-based prevention, and exposure to environmental tobacco smoke in workplaces and public areas.

Survey data were collected during the spring and summer months of 1990 from random samples of adults from Arizona, Michigan, Pennsylvania, and Texas. Telephone interviews were conducted by trained American Cancer Society volunteers using standardized questionnaires. Cluster sampling techniques, interviewer training and supervision, and data collection procedures were designed in conformity with the methodology of the Behavioral Risk Factor Surveillance System of the Centers for Disease Control and Prevention.

Smoking prevalence ranged from a low of approximately 20 percent in Texas to a high of 31 percent in Michigan. Between 60 and 69 percent of the respondents in the four States, including between 44 and 71 percent of current smokers, believe tobacco should be classified as a drug. Around 65 percent of the respondents would support an extra tax on tobacco to finance public campaigns against smoking, and between 61 percent and 69 percent favor banning cigarette advertising in the print media and on billboards. More than 82 percent of the respondents believe that stronger laws should be enacted to prevent the sale of tobacco products to minors, and more than 86 percent believe that existing laws should be better enforced. Current smokers were only slightly less likely than were former and never smokers to indicate support of policy changes to prevent minors' access to tobacco products; the two groups had somewhat more disagreement in the amount of support for the other smoking control policies.

Finally, although between 62 and 88 percent of working respondents reported the presence of smoking restrictions at their workplace, between 26 and 48 percent still reported being bothered by smoking at work.

These study findings suggest that existing smoking control policies are not restrictive enough or are inadequately enforced. The study documents strong public concern in the four States about the inadequacy of current policies and support for the enactment of stronger legislation to control smoking behavior.

RECENT STUDIES INDICATE a high level of public support for the further regulation of tobacco. Forster and coworkers (*1*) found that more than 50 percent of respondents from seven Minnesota communities strongly favored or somewhat favored 12 measures to restrict smoking behavior and decrease the demand for tobacco (including restrictions on advertising, smoking in public places, and minors' access).

Survey results from the 10 communities participating in the Community Intervention Trial for Smoking Cessation (COMMIT) demonstrate strong support for regulatory efforts to limit public exposure to environmental tobacco smoke, the sale of tobacco to minors, and tobacco advertising (*2*). The 1991 Gallup Poll of cigarette smoking (*3*) showed that almost all Americans now favor some type of restriction on smoking in public places, and about half favor a complete ban on cigarette advertising. (Although the percentage supporting such a complete advertising ban is down from the last survey, it had been increasing consistently over the years, from 36 percent in 1977 to 55 percent in 1988.) These findings are all consistent with those reported earlier in the 1989 Surgeon General's report on smoking and health (*4*).

These surveys and other population-based surveys on public attitudes about smoking are somewhat limited by the number of different topics for which data are collected. To address the need for information on a wider range of policy-relevant issues, the Office on Smoking and Health of the Centers for Disease Control and Prevention in conjunction with the American Cancer Society (ACS), designed the Smoking Activity Volunteer Executed Survey (SAVES). Policy-relevant issues covered by SAVES include government subsidies to tobacco farming and sales to developing countries, cigarette taxes, advertising restrictions, minors' access to tobacco products, school-based prevention, and exposure to environmental tobacco smoke in workplaces and public areas.

Methods

Data sources. Survey data were collected during the spring and summer months of 1990 from separate random samples of the adult population (ages 18 and older) of Arizona, Michigan, Pennsylvania, and Texas. We selected these States because (*a*) they had an ACS office that met certain criteria (a history of success with prior ACS projects, a willingness to take an active role in the pilot study, and an interest in and commitment to tobacco control) and (*b*) we desired diverse settings and implementation approaches for the pilot study.

Complete survey data were collected from 294 respondents in Arizona, 98 in Michigan, 291 in Pennsylvania, and 303 in Texas, a total of 986. The response rate ranged from 65 to 100 percent (100 percent in Arizona; 65 percent in Michigan; 75 percent in Pennsylvania; and 79 percent in Texas). Because the State code was missing for 88 persons who refused to participate in the study, State estimates of survey response may be biased. Given the 100 percent response rate in Arizona, it is possible that many of the refusals with missing State codes were in actuality from this State. Response rates were calculated using a formula developed by the Council of American Survey Research Organizations (*5*). This formula apportions dispositions with unknown eligibility status (ring-no-answer and busy) to dispositions representing eligible respondents in the same proportion as exists among calls of known status. The resulting estimates reflect telephone sampling efficiency and the degree of cooperation among eligibles contacted.

Sampling. Cluster sampling techniques used to select the samples for this study were identical to those used for the Behavioral Risk Factor Surveillance System (BRFSS) (*6*) of the Centers for Disease Control and Prevention. The sample was selected from a multistage cluster design using the Waksberg method (*7*). A random sample of telephone number clusters (the first 8 digits of the 10-digit telephone number) was selected from among all possible clusters within the State. Working residential numbers were from the simple random sample screening questions, and thus usable clusters were identified. The number of clusters selected was based on a desired sample size of 300 completed interviews in each State. We chose this sample size so that our survey estimates (of smoking prevalence) would be within 5 percent of the true population estimates.

In the second stage, the actual numbers to be called were obtained from the retained clusters by randomly generating the last two digits of the telephone numbers. Three completed interviews per cluster of 100 numbers was desired. Finally, in the third stage of sampling, one adult (ages 18 and older) was randomly selected to be interviewed from a list of all adults in the household. The randomization procedure for respondent selection

was based on a matrix of the last digit of the telephone number and the number of adults in the household.

Data collection. Data collection materials and procedures were designed in accordance with the methodology of the BRFSS (*6*). Telephone interviews were conducted by trained ACS volunteers according to a protocol that specified the time of day and number of callbacks. Interviews were conducted primarily during evenings and on weekends. Each interviewer identified him or herself to potential respondents as "a volunteer calling for the American Cancer Society."

The training of the supervisory and interviewing staff was conducted comparably for each State. Supervisors participated in a workshop in survey sampling and survey operations, including monitoring techniques and quality control procedures. Interviewers received one day of training and practice, which included a detailed review of the questionnaires, practice with other interviewers, and several mock interviews with local residents. Supervisors periodically monitored each interviewer during the interviews and made repeat calls to a portion of completed cases to verify interviewer compliance with the protocol.

Measures. The survey instruments collected information on a wide range of factors, including demographic characteristics; current smoking behavior and smoking history; attitudes about smoking; knowledge about the health risks of smoking; and exposure to environmental tobacco smoke in the workplace and in public areas.

Statistical techniques. We characterized the distributions of responses across survey respondents (in each State sample and among smoking status groups within each sample) with descriptive statistics. These point estimates and their 95 percent confidence intervals were generated by software (*8*) designed to take into account the complex survey design of the study. We weighted the data by age, sex, and race to reflect the population of each State. We examined differences among groups using the overlap of the 95 percent confidence intervals.

Because of the sampling strategy used in this study (the data generalize to the State, not to the U.S. population), we could not combine the data from the four States. Therefore, we carried out parallel analyses of the four samples. Because of the small number of respondents in Michigan, only overall statistics (those not broken down by smoking status) can be provided. Likewise, small numbers dictated that we stratify smoking status into only two categories—current smokers and former-never smokers.

Table 1. Cigarette smoking prevalence[1] by State—Smoking Activity Volunteer Executed Survey (SAVES) and Behavioral Risk Factor Surveillance System (BRFSS) estimates, 1990.

State	SAVES			BRFSS[2]		
	Sample size	Percent current smokers	CI	Sample size	Percent current smokers	CI
Arizona.....	294	28.2	±6.8	1,492	20.7	±2.3
Pennsylvania ..	291	25.4	±5.4	2,453	23.6	±1.9
Texas.....	303	20.0	±5.2	1,484	22.9	±2.5
Michigan	98	30.5	±13.8	2,374	29.1	±2.0

[1] Smoking prevalence = number of current smokers ÷ number of current smokers + number of former smokers + number of never smokers.
[2] Estimates derived from 1990 Behavioral Risk Factor Surveillance System, Behavioral Surveillance Branch, Office of Surveillance and Analysis, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention, Atlanta, GA.
CI = 95 percent confidence interval.
NOTE: Data are weighted by age, race, and sex.

Results

Smoking prevalence. Smoking prevalence varied approximately 11 percentage points among the four States—from a low of 20 percent in Texas to a high of approximately 31 percent in Michigan (table 1). These estimates are consistent with state-specific estimates derived from the 1990 BRFSS (*9*).

Minors' access to tobacco. More than 84 percent of the respondents from all four States think it is somewhat easy or very easy for teenagers to buy cigarettes where they live (table 2). More than 82 percent of the respondents (between 73 and 85 percent of current smokers and more than 86 percent of former-never smokers) believe that stronger laws should be enacted to prevent the sale of tobacco products to minors. Similarly, more than 86 percent of the respondents believe that existing laws banning the sale of tobacco to minors should be better enforced. A lower percentage (more than 60 percent) of the respondents think that laws should be passed to ban the sale of cigarettes through vending machines. Current smokers (between 42 and 58 percent) were less likely to favor vending machine bans than were former-never smokers (between 66 and 72 percent).

School intervention. Only a minority (between 13 and 33 percent) of the respondents believe that

Table 2. Comparison of current and former-never smokers on attitudes, beliefs, and practices regarding minors' access to

Responses to survey questions	Arizona						Pennsylvania					
	Current (N = 71–90)[1]		Former-never (N = 194–214)		Overall (N = 265–294)		Current (N = 73–80)		Former-never (N = 198–211)		Overall (N = 271–291)	
	Percent	CI	Percent	CI	Percent	CI	Percent	CI	Percent	CI	Percent	CI
How easy do you think it is for teenagers to buy cigarettes near where you live?												
Very/somwhat easy	84.4	± 9.3	88.8	±4.5	87.5	±4.2	71.6	±11.3	88.7	±4.5	84.3	±4.7
Not very easy/not easy at all	4.7	± 4.5	4.9	±3.1	4.8	±2.5	23.9	±10.4	3.8	±2.6	8.9	±3.4
Don't know	10.9	± 8.5	6.3	±3.7	7.6	±3.6	4.5	± 4.4	7.6	±4.1	6.8	±3.2
Do you think there should be stronger laws to prevent tobacco sales to minors?												
Yes	72.7	±12.3	86.3	±5.2	82.5	±5.0	84.5	± 9.2	87.0	±4.9	86.4	±4.6
No	23.9	±12.1	8.5	±4.0	12.8	±4.6	13.1	± 8.9	11.1	±4.6	11.7	±4.4
Don't know	3.4	± 3.2	5.2	±3.8	4.7	±2.9	2.3	± 2.9	1.9	±2.2	2.0	±1.8
Do you think there should be better *enforcement* of existing laws banning the sale of tobacco to minors?												
Yes	79.5	±12.4	88.6	±5.8	86.0	±5.1	86.9	± 8.0	87.0	±4.9	86.4	±4.6
No	19.5	±12.3	5.1	±3.6	9.2	±4.2	7.9	± 6.6	11.1	±4.6	11.7	±4.4
Don't know	1.0	± 1.9	6.2	±4.5	4.7	±3.3	5.2	± 5.3	1.9	±2.2	2.0	±1.8
Do you think there should be laws to ban the sale of cigarettes through vending machines?												
Yes	58.0	±16.4	71.6	±7.1	67.8	±6.5	42.1	±12.9	66.1	±8.9	60.1	±7.8
No	42.0	±16.4	28.4	±7.1	32.2	±6.5	57.9	±12.9	33.9	±8.9	39.9	±7.8
Currently, schools are doing enough to prevent children from starting to use tobacco.												
Agree	12.8	± 8.7	13.3	±5.1	13.2	±4.2	23.0	±10.9	23.0	±7.5	23.0	±6.6
Neutral	39.5	±15.1	38.3	±8.1	38.6	±7.1	26.5	±11.2	28.2	±7.3	27.8	±6.2
Disagree	47.7	±14.8	48.4	±8.0	48.2	±7.3	50.5	±14.0	48.8	±7.3	49.2	±6.9
There should be a strong tobacco education program in the school system.												
Agree	83.5	±10.8	92.7	±4.4	90.1	±4.2	88.6	± 7.7	87.1	±7.7	87.5	±5.9
Neutral	7.1	± 6.7	2.4	±2.2	3.7	±2.5	7.6	± 6.1	3.8	±4.8	4.8	±3.9
Disagree	9.4	± 8.8	4.9	±3.8	6.2	±3.5	3.8	± 5.2	9.1	±6.5	7.7	±5.0
Preventing children from starting smoking is a very important health issue.												
Agree	91.5	± 8.7	99.1	±1.4	97.0	±2.6	99.3	± 1.3	98.4	±1.9	98.6	±1.4
Neutral	6.8	± 8.3	0.7	±1.4	2.4	±2.5	0.7	± 1.3	0.7	±1.3	0.7	±1.0
Disagree	1.7	± 2.7	0.2	±0.4	0.6	±0.8	0.0	. . .	0.9	±1.4	0.7	±1.0

[1] The variability in State sample sizes is a result of missing data for different questions.

CI = 95 percent confidence interval.

tobacco, Smoking Activity Volunteer Executed Survey, 1990.

Texas						Michigan	
Current (N=57–64)		Former-never (N=211–239)		Overall (N=268–303)		Overall (N=87–98)	
Percent	CI	Percent	CI	Percent	CI	Percent	CI
86.3	± 8.5	84.4	±4.5	84.8	±4.0	89.7	± 7.9
13.4	± 8.4	9.6	±4.2	10.4	±3.8	8.2	± 7.7
0.4	± 0.7	6.0	±3.1	4.9	±2.5	2.2	± 2.6
85.2	± 9.3	88.8	±4.9	88.1	±4.1	86.9	± 8.3
8.0	± 7.6	6.1	±3.7	6.5	±3.2	10.4	± 7.6
6.9	± 6.6	5.0	±3.7	5.4	±3.2	2.6	± 2.7
82.0	±10.9	94.9	±3.7	92.3	±3.6	91.7	± 6.2
1.5	± 2.1	2.0	±2.5	1.9	±2.0	5.3	± 5.2
16.5	±10.9	3.1	±2.8	5.7	±3.2	3.0	± 3.2
44.3	±15.1	71.3	±8.5	65.9	±7.4	65.9	±12.4
55.7	±15.1	28.7	±8.5	34.1	±7.4	34.1	±12.4
21.1	±12.1	17.0	±5.2	17.9	±4.9	32.8	±10.2
35.9	±15.7	21.8	±6.2	24.6	±6.2	14.8	± 7.5
43.0	±15.5	61.1	±6.6	57.5	±6.4	52.4	±10.9
81.0	±12.3	93.8	±3.8	91.2	±4.3	91.3	± 6.1
11.6	±10.6	2.5	±2.6	4.3	±3.6	4.5	± 3.6
7.3	± 7.8	3.8	±2.7	4.5	±2.6	4.1	± 4.3
92.0	± 7.3	97.8	±2.3	96.7	±2.3	96.3	± 3.6
6.0	± 6.8	1.1	±1.5	2.0	±1.8	2.6	± 3.0
2.0	± 2.8	1.1	±1.8	1.3	±1.5	1.0	± 2.0

schools are doing enough to prevent children from starting to use tobacco (table 2). More than 87 percent of the respondents agreed that the school system should have a strong tobacco education program. Similarly, almost all of the respondents (more than 96 percent) believe that preventing children from starting to smoke is a very important health issue. More than 91 percent of current smokers agreed with this need to prevent initiation of smoking in adolescence.

Environmental tobacco smoke. Between 81 and 94 percent of the respondents reported that restaurants they patronize have nonsmoking areas most or all of the time (table 3). High percentages (between 81 and 87 percent) of former-never smokers ask to sit in these nonsmoking sections most or all of the time; between 19 and 21 percent of current smokers reported asking to sit in nonsmoking sections most or all of the time. Current smokers (between 46 and 59 percent) were less likely than were former-never smokers (between 74 and 78 percent) to think that the smoking ban on airlines has had a positive effect on people's health. More than half of former-never smokers reported ever asking someone not to smoke.

Between 62 and 88 percent of respondents working outside the home in an enclosed building reported that the place where they work has nonsmoking areas or restrictions on smoking (table 3). Between 26 and 48 percent of working respondents, however, reported being bothered (in the past 12 months) by the amount of cigarette smoke at work. As expected, former-never smokers (between 38 and 55 percent) were more likely than were current smokers (between 11 and 21 percent) to have reported being bothered by environmental tobacco smoke. Moreover, only between 16 and 27 percent of former-never smokers reported ever complaining (in the past 12 months) to their supervisors about the amount of smoke at work.

Advertising restrictions. More than 60 percent of the respondents in the four States, including between 49 and 56 percent of current smokers, agreed that cigarette advertising should be banned in the print media and on billboards (table 4). Similarly, more than 73 percent of the respondents agreed that tobacco companies should be prohibited from distributing free tobacco samples on public property or through the mail; between 58 and 64 percent of current smokers would favor such prohibitions. Finally, between 49 and 59 percent of the respondents, including more than 38 percent of

Table 3. Comparison of current and former-never smokers on attitudes, beliefs and practices regarding environmental tobacco

Responses to survey questions	Arizona						Pennsylvania					
	Current (N = 71–80)[1]		Former-never (N = 194–214)		Overall (N = 265–294)		Current (N = 73–80)		Former-never (N = 198–211)		Overall (N = 271–291)	
	Percent	CI	Percent	CI	Percent	CI	Percent	CI	Percent	CI	Percent	CI
When you go out to eat, how often is there a nonsmoking area?												
All/most of time	96.2	± 3.5	92.0	± 4.8	93.2	±3.5	88.7	± 7.4	78.7	± 7.1	81.2	±5.5
Sometimes/rarely	3.8	± 3.5	7.8	± 4.8	6.7	±3.5	10.2	± 7.2	16.9	± 6.6	15.2	±5.1
Never	0.0	...	0.2	± 0.4	0.1	±0.3	1.1	± 2.1	4.4	± 3.4	3.6	±2.6
If a nonsmoking section is available when you go out to eat, how often do you ask to sit in it?												
All/most of time	18.5	±11.2	87.4	± 5.4	68.1	±7.3	20.1	± 9.2	80.5	± 6.2	65.0	±6.0
Sometimes/rarely	25.4	±15.6	6.6	± 3.9	12.0	±5.5	13.8	± 9.5	10.4	± 4.3	11.3	±3.7
Never	55.0	±15.1	6.0	±4.3	18.9	±5.8	66.1	±11.1	9.0	± 4.6	23.7	±5.7
Do you think that the smoking ban on airplanes has had a positive effect on people's health?												
Yes	45.8	±16.0	78.2	± 8.3	69.1	±7.6	55.9	±12.2	74.2	± 7.3	69.5	±6.1
No	36.7	±16.4	8.1	± 4.5	16.1	±6.1	30.1	±10.7	11.9	± 5.3	16.6	±5.0
Don't know	17.5	±10.1	13.7	± 7.2	14.8	±5.8	14.0	± 4.4	13.9	± 5.8	13.9	±4.7
Have you *ever* asked anyone not to smoke when they were about to light up?												
Yes	...	...	61.4	± 7.4	...	...	...	...	52.3	± 8.6	...	...
No	...	...	38.6	± 7.4	...	...	...	...	47.7	± 8.6	...	...
How often have you asked people not to smoke?												
Many times	...	...	30.5	± 9.3	...	...	...	...	32.1	±10.2	...	...
A few times	...	...	53.8	±11.7	...	...	...	...	53.1	±10.8	...	...
Once or twice	...	...	15.7	± 7.8	...	...	...	...	14.8	± 7.5	...	...
Are there any nonsmoking areas or restrictions on smoking in the place where you work?[2]												
Yes	85.1	±12.5	88.5	± 6.4	87.5	±5.9	72.0	±13.8	59.1	±11.9	62.4	±9.7
No	14.9	±12.5	11.5	± 6.4	12.5	±5.9	28.0	±13.8	40.9	±11.9	37.6	±9.7
In the past 12 months, have you ever been bothered by the amount of cigarette smoke in the place where you work?[2]												
Yes	11.2	±10.6	38.4	±11.1	29.9	±8.8	20.7	±12.2	41.7	±11.0	36.4	±8.9
No	88.8	±10.6	61.6	±11.1	70.1	±8.8	79.3	±12.2	58.3	±11.0	63.6	±8.9
In the past 12 months, have you ever complained to your superiors about the amount of cigarette smoke in the place where you work?[2]												
Yes	4.6	± 8.8	22.3	± 9.7	16.8	±7.4	1.7	± 3.4	26.6	±10.9	20.2	±8.8
No	95.4	± 8.8	77.7	± 9.7	83.2	±7.4	98.3	± 3.4	73.4	±10.9	79.8	±8.8

[1] The variability in State sample sizes is a result of missing data for different questions.

[2] Only respondents who were currently employed outside the home were asked these questions; 48 current smokers and 111 former-never smokers in Arizona; 46 current smokers and 119 former-never smokers in Pennsylvania; 32 current smokers and 128 former-never smokers in Texas; overall 52 in Michigan.

CI = 95 percent confidence interval.

smoke, Smoking Activity Volunteer Executed Survey, 1990.

Texas						Michigan	
Current (N = 57–64)		Former-never (N = 211–239)		Overall (N = 268–303)		Overall (N = 87–98)	
Percent	CI	Percent	CI	Percent	CI	Percent	CI
89.8	± 9.0	90.7	±4.2	90.6	±3.8	93.7	± 5.1
2.7	± 2.9	6.7	±3.6	5.9	±2.9	5.1	± 4.8
7.4	± 8.8	2.6	±2.5	3.5	±2.7	1.3	± 1.8
21.0	±11.5	84.0	±6.2	71.2	±7.1	54.2	±13.0
23.1	±12.7	5.5	±3.5	9.1	±3.8	14.8	± 7.8
56.0	±15.6	10.5	±4.8	19.7	±6.5	31.0	±12.8
59.3	±16.0	75.4	±7.3	72.5	±7.1	60.1	±12.2
36.4	±15.8	9.1	±4.3	13.9	±4.4	19.6	±10.1
4.3	± 6.0	15.6	±6.0	13.6	±5.1	20.3	±13.0
...	...	56.8	±6.7	...	...	...	...
...	...	43.2	±6.7	...	...	...	...
...	...	39.2	±9.1	...	...	...	...
...	...	49.1	±9.1	...	...	...	...
...	...	11.7	±7.3	...	...	...	...
83.6	±13.7	83.6	±8.6	83.6	±7.5	74.8	±17.1
16.4	±13.7	16.4	±8.6	16.4	±7.5	25.2	±17.1
20.1	±15.3	54.5	±9.8	48.2	±9.0	25.9	±11.5
79.9	±15.3	45.5	±9.8	51.8	±9.0	74.1	±11.5
0.7	± 1.4	16.2	±8.9	13.4	±7.4	4.0	± 4.8
99.3	± 1.4	83.8	±8.9	86.6	±7.4	96.0	± 4.8

current smokers, would favor prohibiting tobacco companies from sponsoring sporting events or advertising their products at these events.

Other attitudes and beliefs about smoking. Between 60 and 69 percent of the respondents believe that tobacco should be classified as a drug (table 5). Current smokers (between 44 and 71 percent) were about as likely to think that tobacco should be classified as a drug as were former-never smokers (between 59 and 68 percent). More than 63 percent of the respondents agreed that an extra tax should be levied on tobacco to finance public campaigns against smoking. Although former-never smokers (more than 72 percent) were significantly more likely than were current smokers to support an extra tax, between 40 and 43 percent of current smokers favor increased taxes on tobacco. Between 75 and 81 percent of the respondents agreed that the government should not help U.S. tobacco companies sell their products to developing countries, although former-never smokers (between 79 and 88 percent) were more likely to agree with this than were current smokers (63 to 72 percent). Overall, between 59 and 72 percent of the respondents agreed that the government should not help farmers grow and sell tobacco. Former-never smokers (64–81 percent), however, were more likely to agree with this than were current smokers (40–49 percent).

Discussion

Findings from SAVES were consistent among the four State samples. These findings support the increased efforts of public health policy makers to regulate tobacco. We found the strongest public support for restricting minors' access to tobacco. Survey respondents support stronger legislation, better enforcement of existing laws, and strong prevention programs in the schools. Previous surveys have also demonstrated high levels of public agreement with respect to restricting the sale of cigarettes to minors (*1,2,4*) and banning student smoking at school (*1,2*).

A majority of SAVES respondents favor restrictions on advertising. Prohibiting the distribution of free tobacco samples is most strongly supported (more than 73 percent), followed by banning advertising in the print media and on billboards (more than 60 percent), and by banning the sponsorship of sporting events or advertising at these events (between 49 and 59 percent). When differences in response categories are taken into account, there is

Table 4. Comparison of current and former-never smokers on attitudes, beliefs, and practices regarding advertising restric

Responses to survey questions	Arizona						Pennsylvania					
	Current (N = 71–80)[1]		Former-never (N = 194–214)		Overall (N = 265–294)		Current (N = 73–80)		Former-never (N = 198–211)		Overall (N = 271–291)	
	Percent	CI	Percent	CI	Percent	CI	Percent	CI	Percent	CI	Percent	CI
Advertising of cigarettes should be banned in newspapers, magazines, and outdoor posters or billboards.												
Agree	54.8	±15.3	64.3	±8.1	61.6	±6.4	48.6	±13.4	65.0	±7.2	60.8	±6.8
Neutral	17.6	±13.7	15.4	±5.7	16.0	±5.5	10.8	± 7.0	9.8	±4.7	10.1	±4.0
Disagree	27.6	±13.0	20.4	±7.4	22.4	±6.3	40.5	±12.8	25.2	±7.2	29.1	±6.6
Tobacco companies should be prohibited from distributing free tobacco samples on public property or through the mail.												
Agree	64.0	±14.6	76.6	±7.4	73.0	±6.5	63.0	±13.3	80.5	±7.9	76.1	±7.5
Neutral	16.2	±14.9	10.4	±5.1	12.0	±5.6	9.8	± 7.2	4.0	±2.7	5.5	±2.8
Disagree	19.9	±10.6	13.0	±6.0	14.9	±4.7	27.2	±11.3	15.5	±7.7	18.5	±7.1
Tobacco companies should be prohibited from sponsoring sports events or advertising their products at these events.												
Agree	37.8	±13.8	53.9	±8.1	49.4	±7.6	41.8	±13.7	56.9	±8.1	53.1	±7.4
Neutral	16.9	±15.6	22.4	±7.3	20.9	±7.3	15.9	± 9.1	10.6	±4.7	11.9	±4.4
Disagree	45.3	±15.4	23.7	±7.9	29.8	±8.0	42.3	±12.2	32.6	±8.3	35.0	±7.7

[1] The variability in State sample sizes is a result of missing data for different questions.

CI = 95 percent confidence interval.

Table 5. Comparison of current and former-never smokers on attitudes, beliefs, and practices regarding other smoking-related

Responses to survey questions	Arizona						Pennsylvania					
	Current (N = 71–80)[1]		Former-never (N = 194–214)		Overall (N = 265–294)		Current (N = 73–80)		Former-never (N = 198–211)		Overall (N = 271–291)	
	Percent	CI	Percent	CI	Percent	CI	Percent	CI	Percent	CI	Percent	CI
Tobacco should be classified as a drug by the government.												
Agree	71.1	±10.9	68.3	±8.4	69.1	±7.1	64.8	±10.9	59.4	±7.9	60.8	±6.5
Neutral	10.8	± 8.5	13.7	±5.1	12.9	±4.3	9.7	± 6.6	17.5	±6.0	15.5	±5.0
Disagree	18.0	± 9.2	18.0	±7.8	18.0	±6.5	25.5	± 9.3	23.1	±7.5	23.7	±6.1
There should be an extra tax on tobacco that is used to cover the cost of campaigns to reduce smoking.												
Agree	42.5	±15.0	72.9	±6.5	64.3	±6.9	39.9	±13.2	74.7	±7.0	65.9	±6.5
Neutral	4.5	± 3.9	13.4	±5.6	10.9	±4.3	6.3	± 5.7	8.8	±4.8	8.2	±3.7
Disagree	52.9	±14.8	13.7	±5.8	24.8	±7.3	53.8	±13.2	16.5	±5.9	26.0	±5.7
The government should not help U.S. tobacco companies sell their products to developing countries.												
Agree	62.7	±15.2	87.8	±5.8	80.7	±5.9	65.2	±12.5	78.9	±6.2	75.4	±5.6
Neutral	16.3	±13.2	9.8	±5.7	11.6	±5.5	17.5	± 9.7	8.7	±4.1	11.0	±3.9
Disagree	21.0	±12.0	2.4	±2.1	7.6	±3.6	17.2	± 8.8	12.4	±5.2	13.6	±4.4
The government should not help farmers grow and sell tobacco.												
Agree	49.1	±14.1	81.2	±6.7	72.2	±7.1	45.1	±11.8	67.1	±7.1	61.5	±5.8
Neutral	16.8	±15.0	10.5	±4.0	12.3	±5.2	12.9	± 7.4	12.4	±4.8	12.5	±4.0
Disagree	34.1	±13.8	8.3	±5.8	15.6	±6.4	42.0	±11.4	20.5	±6.5	26.0	±5.5

[1] The variability in State sample sizes is a result of missing data for different questions.

CI = 95 percent confidence interval.

tions, Smoking Activity Volunteer Executed Survey, 1990.

Texas						Michigan	
Current (N=57–64)		Former-never (N=211–239)		Overall (N=268–303)		Overall (N=87–98)	
Percent	CI	Percent	CI	Percent	CI	Percent	CI
56.1	±13.9	67.3	±6.2	65.1	±5.8	68.7	±10.0
9.9	± 8.3	11.2	±4.8	11.0	±4.5	6.0	± 4.3
34.0	±13.2	21.4	±5.8	24.0	±5.2	25.4	± 9.9
58.0	±14.4	80.0	±6.0	75.6	±5.7	80.7	± 8.6
12.8	± 8.4	7.8	±4.5	8.8	±4.0	7.4	± 5.7
29.2	±13.7	12.2	±4.8	15.6	±5.0	11.9	± 7.4
41.2	±15.3	63.0	±7.3	58.7	±6.7	58.0	±14.3
9.5	± 9.2	11.1	±4.8	10.8	±4.5	12.0	± 7.5
49.3	±15.8	25.9	±6.9	30.6	±6.7	30.0	±11.6

issues, Smoking Activity Volunteer Executed Survey, 1990.

Texas						Michigan	
Current (N=57–64)		Former-never (N=211–239)		Overall (N=268–303)		Overall (N=87–98)	
Percent	CI	Percent	CI	Percent	CI	Percent	CI
43.6	±15.1	66.0	±8.1	61.5	±7.6	60.1	±12.2
6.0	± 7.3	11.1	±5.8	10.1	±5.5	15.0	± 8.1
50.4	±15.6	22.9	±6.7	28.4	±6.4	24.2	± 9.7
42.9	±13.8	72.8	±7.2	66.8	±6.7	63.6	±14.0
8.4	± 8.7	10.2	±4.7	9.8	±4.5	10.5	± 7.8
48.7	±14.6	16.9	±5.8	23.4	±6.2	25.9	±13.3
71.6	±13.3	79.3	±6.1	77.8	±5.7	76.3	± 9.4
12.9	± 9.9	5.0	±2.8	6.6	±3.1	17.0	± 8.1
15.5	±10.6	15.6	±5.8	15.6	±5.1	6.7	± 4.8
39.6	±13.9	64.0	±7.3	59.1	±6.4	71.2	±10.1
20.1	±10.6	14.7	±5.5	15.8	±4.8	8.6	± 5.6
40.2	±15.0	21.3	±6.5	25.1	±5.7	20.2	± 9.5

'We found the strongest public support for restricting minors' access to tobacco. Survey respondents support stronger legislation, better enforcement of existing laws, and strong prevention programs in the schools.'

considerable agreement between these findings and those reported from other recent surveys (*1–4*). The one exception is that a lower percentage (47 percent) of the 1991 Gallup Poll (*3*) respondents favor advertising bans. This smaller percentage may be the result of differences in question wording (the Gallup wording emphasized "complete" bans) or of differences in the population sampled (Gallup selects a representative sample of the entire United States, as opposed to the SAVES pilot study, which sampled only four States).

A majority of SAVES respondents (64–67 percent) support extra taxation of tobacco to pay for antismoking campaigns. This percentage is slightly lower than that reported in Minnesota (69 percent) (*1*), a State considered to be a leader in smoking policy since 1975. Data from SAVES suggest that there continues to be an increase in public acceptance of increased cigarette taxes (*4*). Differences in question wording and response categories across surveys, however, complicate this comparison.

Although between 62 and 88 percent of working respondents to SAVES reported the presence of nonsmoking areas or restrictions on smoking in the workplace, between 26 and 48 percent of the respondents reported being bothered (in the past 12 months) by the amount of smoke at work. Moreover, only a small percentage of working respondents reported ever complaining (in the past 12 months) to their superiors about environmental tobacco smoke at work. As expected, former-never smokers were more likely to have ever complained about environmental tobacco smoke at work than were current smokers.

These data suggest that existing worksite tobacco control policies are not restrictive enough or are being inadequately enforced. The disparity between discomfort (being bothered by smoke at work) and behavior (complaining to supervisors) suggests that it is difficult in work settings for people to speak out and voice their complaints rather than tolerate objectionable behavior.

Previous research has consistently documented public support for policies that limit smoking in workplaces (as well as other public places such as airplanes and restaurants) (*1–4*). For example, by 1991, 91 percent of adults supported restrictions on smoking at work (69 percent wanted certain areas set aside for smoking, and 25 percent wanted a total ban on smoking in the workplace) (*3*).

Given the imprecision of the estimates (because of small sample sizes, the confidence intervals around most of the estimates were wide), we were not able to detect major differences in attitudes across smoking status categories. One exception is our finding that current smokers seemed much less likely to support increased taxes on tobacco than were former-never smokers. This finding supports earlier research (*10,11*) on the effects of self-interest on opinions concerning public smoking restrictions and taxation.

Because potential respondents and respondents knew that the person calling them was a volunteer from the American Cancer Society, it is possible that bias may have entered the study. There are two main sources of potential bias—(*a*) survey nonresponse (for example, if those who participated in the study were more supportive of ACS policies than were nonparticipants); and (*b*) interviewer effects (if, for example, respondents gave interviewers answers they thought the interviewers wanted to hear). However, interviewers received adequate and appropriate training and supervision. Moreover, the results from this study are consistent with those from other surveys. Therefore, it is not likely that our results were significantly biased by interviewer identification with the ACS.

In summary, our study findings document strong public concern in the four States about the inadequacy of current smoking policies and support for the enactment of stronger legislation to control smoking behavior. These strong public attitudes against tobacco were consistent among the four geographically diverse States in the study.

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