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Title
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Permalink
https://escholarship.org/uc/item/7g7280zf

Journal
Tobacco Control, 1(4)

ISSN
0964-4563

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Publication Date
1992-12-01

DOI
10.1136/tc.1.4.256

Peer reviewed

Reasons smokers give for stopping smoking: do they relate to success in stopping?

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Abstract

Objective – To determine the frequency and distribution of reasons that smokers give for stopping smoking, and whether any type of reason is associated with a greater likelihood of success than any other.

Design – Univariate and multivariate analyses of reasons for stopping smoking by demographic characteristics, success in stopping by demographic characteristics, and success in stopping by reasons for stopping (adjusting for demographic variables).

Subjects – 3788 current and former smokers who had stopped in the five years before the interview as part of the 1987 National Health Interview Survey (Cancer Control Supplement), a population survey of non-institutionalised adults in the United States.

Main outcome measures – Reasons for stopping and percentage of successful quitters (abstinent for at least one year at the time of the survey).

Results – Respondents mentioned health reasons as a motivating factor most frequently (health reasons, 62 %; social reasons, 22 %; cost, 9 %; lost desire, 5 %). Important relations were found between demographic factors and reasons cited and between demographic factors and success in stopping. After adjustment for differences in demographic variables related to success in stopping, smokers citing only health, social, or cost reasons had about the same likelihood of success. However, smokers citing a combination of health and social reasons had a higher likelihood of stopping successfully than had those citing only social or cost reasons, but their likelihood of success was not increased compared with those citing only health reasons or loss of desire.

Conclusion – Even though the social acceptability of smoking has been increasingly emphasised in the campaign against smoking, the health message should continue to have a major role. Smokers who cite a social reason for stopping are more likely to stop successfully if they feel that they are stopping for their own health as well.

(*Tobacco Control* 1992; 1: 256–63)

Introduction

The prevalence of smoking in the United States was 28 % in 1988, and if the current downward trend of the past 30 years continues, it will decrease at a constant rate to 22 % in the year 2000.[1] One of the objectives of the US Public Health Service for the year 2000 is to reduce smoking prevalence to 15 %.[2] To achieve this goal, it will be necessary to markedly accelerate the rate of successful quitting among smokers. Currently, over 30 % of smokers try to stop in any given year.[3] However, only between 5 % and 10 % are able to maintain abstinence for one year,[4,5] and this long term success rate does not seem to have changed much since the 1970s.[6] Thus, the problem is one of preventing relapse.

The decision of smokers to try to stop and their willingness to struggle to maintain the effort reflect their motivation. The stronger the motivation is at the time of stopping smoking the higher the likelihood of success; studies of smoking cessation in relation to cardiac disease show particularly high rates of success.[7,8] Also, those who do not relapse may be motivated to stop for different reasons than those who do relapse. If this is true, knowing which reasons are cited by successful quitters may help in the development of more effective approaches for motivating smokers to stop smoking.

Public health interventions to motivate people to stop smoking have been based on three themes: health consequences, social influences, and cost.[9] The first anti-smoking approach, typified by the field in the 1960s and 1970s, was to rely almost solely on publicising the health consequences of smoking. As developed in the health belief model,[10,11] this theme assumes that before a behavioural change will occur for health reasons, individuals must believe that their behaviour is seriously and negatively affecting their health.

The role of social influences in behaviour change is explained in social learning theory.[12] This theory emphasises that there are three reciprocal influences determining whether a particular behaviour will be performed in a given situation. These are the social environment, the behaviour itself, and the individual's cognitions. The environment is responsible for several social influences on an individual. These include both social cues from other people about what is considered to be acceptable behaviour and advice from health professionals on what is unhealthy behaviour. The

environmental tobacco smoke issue has placed the social theme of stopping smoking for the sake of others high on the list of themes in anti-smoking campaigns over the past five years.

An almost universal rule in economics is that the demand for a commodity declines as its price increases. Several econometric studies have confirmed that this relation holds for cigarettes.[3] One method of decreasing cigarette consumption is to increase the excise tax on cigarettes, as has been done recently (1989) in California, where voters passed a tax increase that effectively doubled the previously combined state and federal excise tax on a pack of cigarettes to a total of 51 cents,[13] and in Canada, where the excise tax on a pack of cigarettes now exceeds $C2.00.[14]

In this paper we examine data from the non-institutionalised US population collected as part of the 1987 National Health Interview Survey concerning the different motivational reasons that smokers had for attempting to stop smoking between 1983 and 1987. We also consider which reasons or combinations of reasons given for attempting to stop are most highly related to successful stopping.

Methods

STUDY POPULATION

Data on reasons for stopping smoking were obtained from smokers who had smoked for at least five years and had tried to stop smoking in the five years before their interview as part of the 1987 National Health Interview Survey. In the Cancer Control Supplement of this survey 22 043 people aged 18 years and older were interviewed in detail about their recent smoking and quitting behaviour.

This survey is a cross sectional, population-based survey in which the United States is divided into geographically defined areas called primary sampling units. The units are stratified, and one or more of them are randomly selected within each stratum. Within each selected sampling unit a small cluster of households is randomly chosen for interview. Members of these households are first contacted by post and then interviewed in person. The questions on tobacco use are answered by the individuals themselves. When a respondent cannot be interviewed in person this section of the survey is administered by telephone. The survey sample is weighted to reflect the age, sex, and racial distribution of the United States population and to adjust for the survey design features. Further details concerning the survey design have been published.[15,16] The response rate for this survey was 87%.

Ever smokers were defined as those who had smoked at least 100 cigarettes in their life. Current smokers were defined as those who answered "yes" to the question "Do you smoke cigarettes now?" Recent quitting history was obtained by asking former smokers "About how long has it been since you last smoked cigarettes regularly?" and by asking current smokers who indicated that they had

ever tried to stop "When was your last serious attempt to quit smoking?"

In this study we are concerned only with addicted smokers who had tried to stop in the recent past (which we defined as five years before the survey). Thus, only smokers who had smoked for at least five years were considered. We defined a successful quitter as a person who had been abstinent for at least one year at the time of the survey (n = 1172). We defined a failed quitter as a current smoker who had attempted to stop in the past five years (n = 2616). Given the different circumstances relating to smoking during pregnancy,[17] we decided to consider such individuals ineligible for the analysis.

Of the total survey population of 22 043, we identified 3788 people (1172 former and 2616 current smokers) who could be identified as meeting the eligibility criteria outlined above (figure). Altogether 1222 people were excluded because relevant information was not available (801 with unknown smoking status, 228 with unknown smoking duration, and 193 with unknown date for trying to stop smoking) to assess eligibility. Thus the final study population analysed represents 75% (3788/(3788 + 1222)) of those potentially eligible.

Demographic variables analysed in this study included age, sex, race, education, income, and marital status.

REASONS FOR QUITTING

Both former and current smokers were asked the following open-ended question: "Thinking about the time(s) you tried to quit smoking, please tell me the reasons you had for trying to quit." Respondents could give more than one reason and all reasons given were coded into 13 predefined categories, including pregnancy (see previous section). A miscellaneous category was used for all responses that did not fit into any of the predefined categories. No descriptive information was retained for these other miscellaneous reasons. For the present analysis the reasons for stopping smoking were classified in the following manner (see table 1). Any health symptom or concern about either present or future health was classified as a health reason; pressure from family or friends, advice from a doctor, setting a good example, effect of smoking on others, and "dirty habit" were classified as social reasons; and cost of cigarettes, loss of desire to smoke, and the other miscellaneous category were treated separately.

STATISTICAL METHODS

For variance estimation and significance testing, we used the SUDAAN computer program, which incorporates the intricacies of the design and population weighting procedures of the National Health Interview Survey.[18] Logistic regressions (program LOGISTIC of SUDAAN) were used to examine the relation of demographic characteristics to each of the four main classes of reasons
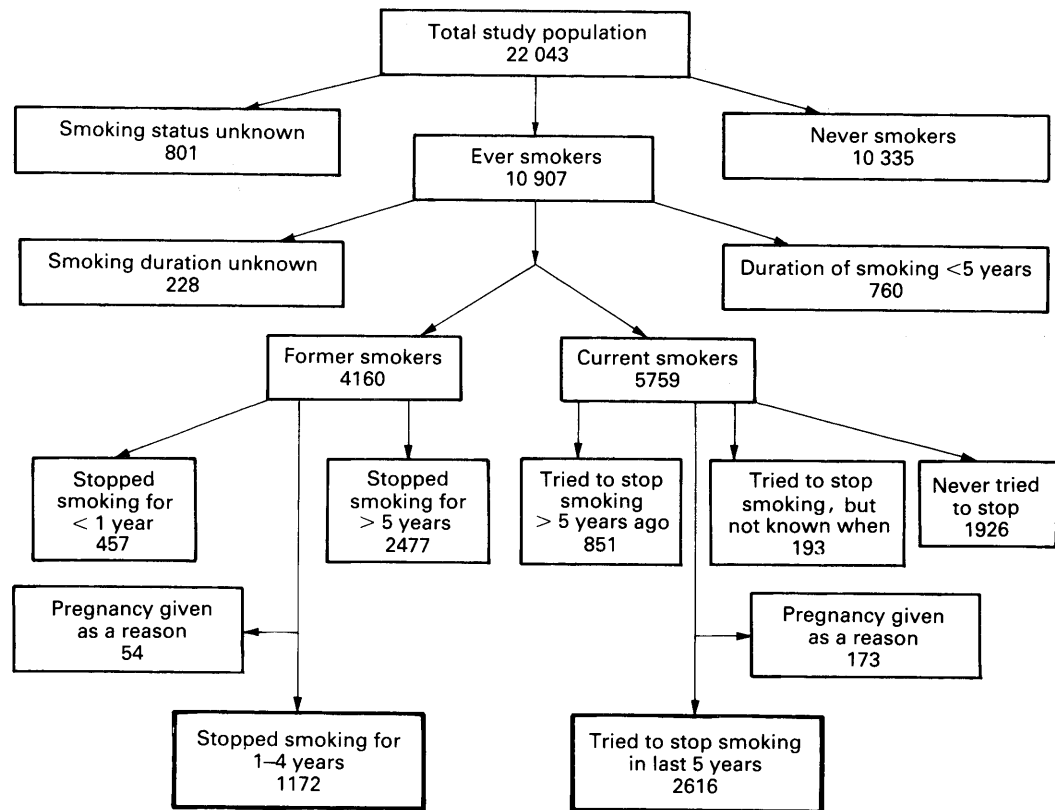
Derivation of study population from respondents to the 1987 National Health Interview Survey

(health, social, cost, and loss of desire) for stopping smoking. We report odds ratios, as determined by the regression coefficients, for independently significant demographic variables.

With additional logistic regressions, we modelled the likelihood of successfully stopping smoking with respect to categories of reasons given, adjusting for demographic characteristics. We categorised the reasons for stopping smoking into nine mutually exclusive categories: health only, social only, cost only, loss of desire only, miscellaneous only, health and social, health and cost, other combinations including loss of desire, and other combinations excluding loss of desire. A separate analysis was made using each category in turn as the reference category for comparison with all the other categories.

Results

REASONS FOR TRYING TO STOP SMOKING

Table 1 presents the weighted distribution of respondents by sex for individual reasons (including "other") to stop smoking that were coded as part of the questionnaire. Of the reasons cited, 81 % could be specifically categorised; only 19 % were categorised as "other miscellaneous." Health-related reasons (four reasons) were the most frequently mentioned (about 62 % of the study sample) as motivating factors. Nearly half of those citing health reasons were concerned about the effects of their smoking on their present health (reasons 1 and 2). Social reasons (five reasons) were mentioned by 19·3 % of men and 23·9 % of

Table 1 Reasons mentioned by men and women for stopping smoking. Values are weighted percentages (SE)

Reason	Men (n = 1800)	Women (n = 1988)
Health	62·6 (1·3)	62·4 (1.5)
Health symptom/problem	19·1 (1·1)	18·6 (1·1)
Present health	13·1 (1·0)	14·0 (1·0)
Future health	25·0 (1·1)	26·1 (1·3)
Both present and future health	16·8 (1·1)	16·0 (1·0)
Social	19·3 (1·1)	23·9 (1·2)
Pressure from family/friends	9·1 (0·7)	11·2 (0·8)
Advice from doctor	3·1 (0·5)	3·1 (0·5)
Setting example for children	2·2 (0·4)	3·6 (0·5)
Effect of smoking on others	2·3 (0·4)	4·0 (0·6)
Dirty habit	4·8 (0·6)	6·3 (0·6)
Cost of cigarettes	7·8 (0·7)	9·3 (0·8)
Lost desire to smoke	5·1 (0·6)	4·6 (0·6)
Other miscellaneous	18·9 (1·2)	19·7 (1·4)

Data from the 1987 National Health Interview Survey (Cancer Control Supplement), a United States population-based survey. Included were people who tried to stop smoking in the five years before the survey.

women (overall by 21·5 % of the sample), and pressure from family or friends was the social reason most often mentioned (by 9·1 % of men and 11·2 % of women). The cost of cigarettes as a factor in the decision to stop was mentioned by 7·8 % of men and 9·3 % of women (overall by 8·5 % of the sample), and loss of desire was stated overall by 4·9 %. Only 3·2 % gave no reason for stopping.

REASON CATEGORY AND DEMOGRAPHIC CHARACTERISTICS

Table 2 presents the percentages of respondents citing health and social reasons by demographic subgroup. There was no significant age trend for citing health or social

Table 2 *Citation of health and social reasons for stopping smoking according to demographic characteristics*

	Health (n = 2392)			Social (n = 798)		
	n	Weighted %	SE	n	Weighted %	SE
Age (years):						
< 30	538	61·4	1·8	181	19·4	1·7
30–44	918	65·0	1·4	309	22·4	1·2
45–64	671	62·1	2·1	208	21·1	1·6
⩾ 65	264	57·5	2·6	100	24·2	2·7
p value		< 0·1			NS	
Education:						
< High school graduate	557	56·8	1·9	181	20·6	1·8
High school graduate	988	59·8	1·4	346	22·0	1·4
Some college	487	69·1	2·0	165	21·3	1·7
College graduate	360	73·6	2·4	106	21·8	2·1
p value		< 0·0001			NS	
Income ($ per year):						
< 10000	616	57·2	1·7	201	20·2	1·5
10000–19999	563	60·2	2·1	186	21·7	1·9
20000–29999	471	61·8	2·4	167	20·8	1·6
30000–39999	317	67·1	2·3	90	20·4	2·1
⩾ 40000	425	68·7	2·1	154	24·1	1·9
p value		< 0·001			NS	
Marital status:						
Never married	394	64·1	2·6	108	16·9	2·0
Married	1315	62·6	1·2	483	23·0	1·1
Widowed	188	52·1	3·5	71	23·4	3·4
Divorced	390	65·3	2·4	112	19·2	1·9
Separated	105	64·7	3·8	24	12·8	2·8
p value		< 0·05			< 0·01	
Race:						
White	2062	63·8	1·0	699	22·2	0·9
Black	291	54·8	2·9	89	17·5	2·1
Other	39	50·6	12·8	10	12·5	5·6
p value		< 0·01			NS	
Sex:						
Male	1136	62·6	1·3	335	19·3	1·1
Female	1256	62·4	1·5	463	23·9	1·2
p value		NS			< 0·01	

Data from the 1987 National Health Interview Survey (Cancer Control Supplement), a United States population-based survey. Included were people who tried to stop smoking in the five years before the survey.

reasons. The percentage of those citing health reasons for quitting increased with the amount of formal education received and with reported family income. There were also differences with marital status and with race. Whites (63·8 %) cited health reasons more often than did either blacks (54·8 %) or people of other races (50·6 %). Although, women cited social reasons significantly more often than did men, the difference was not large (23·9 % and 19·3 %, respectively). Marital status was also related to mention of social reasons for stopping; the percentages were higher for married and widowed people than for those in the other categories. The percentage of respondents citing cost as a reason for stopping varied inversely with income (p < 0·05), marital status (p < 0·05), and race (p < 0·05). Cost as a reason was cited nearly twice as often by respondents in the lowest-income category as it was by those in the highest-income category; however, even in the lowest-income category, fewer than 11 % of the respondents cited cost as a reason. The only factor related to citing loss of desire to smoke was age (p < 0·05), with younger respondents more likely to give this reason than older respondents.

The logistic regression analyses allowed us to evaluate the relation of each demographic characteristic to category of reason for stopping smoking with adjustment for each of the other demographic characteristics. Education (p < 0·0001) was by far the most important factor related to citing health as a reason to stop smoking, but income was also independently important. Each education group was 14 % more likely than the next less educated

group to cite health as a reason, and on average each higher income group was 9 % more likely than the next lowest. For the social reason category, sex (p < 0·002) and marital status (p < 0·02) emerged as significant independent variables. The adjusted odds for a woman to cite social reasons for stopping smoking cigarettes were 1·34 times those for a man. The only significant influence on cost as a reason to stop proved to be income (p < 0·004): people at a lower income level were 16 % more likely than those in the next highest level to cite cost as a reason to quit.

SUCCESS IN STOPPING

Success in stopping varied according to all the demographic factors considered (univariate analysis, table 3). When considered jointly in a logistic regression, age (p < 0·0001) was by far the most important independent factor followed by educational level (p < 0·001) and to a lesser extent by marital status and race (p < 0·05).

Quitting success rate varied according to the category or combination of reasons given (univariate analysis, table 4). When only one category of reason was stated, loss of desire was associated with the highest success rate (45·3 %) followed by health (33·6 %) and social (30·0 %) reasons. Cost as the only reason had about the same rate of success (21·3 %) as having no reason (22·4 %). When health and social reasons were mentioned together with possibly other reasons (excluding loss of desire), the success rate increased slightly to 36·1 %. Other multiple categories (both in-

Table 3 Univariate analysis of success at stopping smoking by demographic characteristics

Demographic characteristic	Success		
	n	Weighted %	SE
Age (years):			
< 30	882	21·1	1·7
30–44	1420	31·2	1·4
45–64	1036	36·5	1·8
≥ 65	450	44·4	2·6
p value		< 0·0001	
Education:			
< High school graduate	960	27·1	1·6
High school graduate	1603	28·9	1·3
Some college	738	36·2	2·0
College graduate	437	42·0	2·5
p value		< 0·0001	
Income ($ per year):			
< 10000	1404	26·9	1·6
10000–19999	920	30·9	1·8
20000–29999	743	28·8	2·0
30000–39999	468	33·7	2·5
≥ 40000	610	38·7	2·0
p value		< 0·001	
Marital status:			
Never married	621	22·2	2·3
Married	2089	35·2	1·1
Widowed	329	33·8	3·0
Divorced	583	21·6	1·9
Separated	166	20·3	3·5
p value		< 0·01	
Race:			
White	3193	32·8	0·9
Black	529	21·3	2·1
Other	66	30·1	8·3
p value		< 0·01	
Sex:			
Male	1800	33·3	1·3
Female	1988	29·6	1·2
p value		0·07	

Data from the 1987 National Health Interview Survey (Cancer Control Supplement), a United States population-based survey. Included were people who tried to stop smoking in the five years before the survey.

Table 4 Univariate analysis of success at stopping smoking by reasons for stopping. Values are weighted percentages (SE)

Category of reason	Success	Successful quitters
Health only (n = 1824)	33·6 (1·4)	51·4 (1·7)
Social only (n = 423)	30·0 (2·4)	10·8 (1·0)
Cost only (n = 116)	21·3 (4·7)	2·0 (0·5)
Lost desire only (n = 135)	45·3 (5·2)	5·1 (0·7)
Other only (n = 495)	22·4 (2·4)	9·5 (1·1)
Health and social* (n = 261)	36·1 (3·5)	7·9 (0·9)
Health and cost* (n = 172)	23·3 (4·1)	3·1 (0·6)
Other multiple with lost desire (n = 51)	54·9 (8·4)	2·3 (0·4)
Other multiple excluding lost desire (n = 188)	35·9 (4·4)	5·5 (0·8)
No reason given (n = 123)	22·8 (4·5)	2·4 (0·5)

* At least one of each and possibly others excluding lost desire.
Data from the 1987 National Health Interview Survey (Cancer Control Supplement), a United States population-based survey. Included were people who tried to stop smoking in the five years before the survey.

cluding and excluding loss of desire) were also associated with higher rates of success. Since a health reason alone was the reason category of nearly half the study respondents (48·2%, weighted percentage), it is to be expected that the majority of successful quitters would derive from this subgroup (table 4). Also, since the category with the highest success rate (other multiple with lost desire) contained the fewest respondents (1·3%, weighted percentage), only 2·3% of the successful quitters were derived from this subgroup.

Logistic regression adjusted for significant demographic variables (age, sex, race, income,

and marital status) and allowed us to compare particular categories of reasons with others as predictors of quitting success. After adjustment, health-only, social-only, cost-only, and loss of desire-only were all about equally associated with quitting success, and all were more related than other-only or other multiple (excluding loss of desire). Only the combination of health and social reasons was significantly more related to successful quitting than many of the other reason categories: social-only (p < 0·0001), cost-only (p < 0·05), other-only (p < 0·0001), health and cost (p < 0·001), and other multiple (excluding loss of desire) (p < 0·0001).

Discussion

Two thirds of smokers who reported trying to stop smoking gave their personal health as the main reason: about a fifth indicated that a current health condition had motivated them to stop. About one fifth of the quitters cited social reasons, with pressure from family or friends the major factor. Cost was named as a reason by only 9% of quitters. The average price of a packet of cigarettes in the United States in 1990 was only $1.82,[19] which relative to income is cheaper than in any other country in the world. Thus, our finding that cost is not particularly related to success in stopping smoking may not apply in other countries. However, income is related to citing cost as a reason, suggesting that there is validity to the price elasticity argument. If the tax on cigarettes in the United States were to reach the Canadian level, the price of cigarettes would double and we could expect much more cost motivation to stop smoking in this country.

In recalling the reasons that they perform a behaviour people tend to attribute the cause to their own internal decisions rather than to indicate that they were influenced by an external cause.[20] Therefore, both the social and cost reasons may be under-represented in this study relative to health reasons. More highly educated people were much more likely to indicate that they were stopping for a health reason than were those with less education. Importantly, given the recall biases mentioned above, we believe that someone who did not mention a health reason for stopping smoking when they were given the opportunity to cite multiple reasons, probably does not accept that stopping would be of major benefit to their health. About one third of smokers trying to stop and all smokers who were not actively trying to stop could benefit from a better understanding of the advantages of smoking cessation to their own personal health. Even when individuals do not suffer from overt symptoms of smoking-related diseases, smoking cessation can provide immediate health benefits.[21] Physicians are in a particularly good position to convey this message and thereby motivate more people to stop.[22]

Social reasons for stopping were mentioned significantly more often by women than by men and more often by those who were married or widowed than those who were single or

divorced. The major social reason for stopping was pressure from family or friends; this finding suggests either that there is significantly more social pressure on women smokers to quit than there is on men, or that women are more susceptible to such pressure. New campaigns emphasising passive smoking are strategies aimed at motivating people to stop smoking for social reasons.

Success in stopping smoking is known to be associated with sociodemographic variables,[23-25] and our findings confirm those of other investigators. There was a significant independent relation between success and older age,[24] higher education,[24,25] marital status (married and widowed), and white race.[23] The association with sex was only of borderline significance, which is consistent with national data that showed that the rate of change over time in quit rate for men compared with women was only of borderline significance[23] and that sex did not discriminate between successful quitters and relapsers.[24]

We then controlled for these known differences in sociodemographic success rates in comparing the effect on success of the different reasons for quitting. Our findings indicated that, after adjustment, loss of desire was not associated with greater success than the other single reasons. This result may be confounded by age; younger people are more likely to mention loss of desire (table 2), and quitting success is lower for younger smokers (table 3).

After adjustment, health, social, and cost reasons were about equally related to success, but health and social reasons together had an advantage over social reasons alone and several other reason categories. Thus, those who indicate that they have a social reason for quitting are more likely to be successful if they believe that they are not smoking for the benefit of their own health as well.

During the study period, 1983–7, approximately 60 % of those who smoked tried to stop and about one third of those trying to stop were successful (abstinent for one year or more at the time of the survey). This percentage is considerably higher than the usual 16–20 % success rates at one year estimated for any single quit attempt[8] and suggests that the respondents had made multiple attempts.

The proportions of respondents citing health, social pressure, or cost as a reason for trying to stop smoking are consistent with those from a small (n = 601) survey of nurses in South Carolina.[26] Health reasons were given most often by nurses who had successfully stopped (61 %), as well as by those who had cut down on the amount smoked (90 %); social reasons were the next most frequently cited reason in both groups (about 50 %); and cost was cited by 29 % of smoking nurses as a reason to cut down on their smoking but was not analysed as a reason for smoking cessation. In that study about 70 % of the respondents had an annual family income of $20 000 or less, which may account for the relatively higher concern for cost than was observed in our study, in which only 43 % had annual family incomes of $20 000 or less.

A recent study in Australia showed that a respondent's perceived likelihood to quit smoking was associated with successful stopping.[27] For 1661 smokers the researchers analysed the relation between perceived likelihood to stop and several other factors, including health and social arguments for smoking cessation.[27] Smokers were categorised as extremely unlikely, unlikely, likely, or extremely likely to quit smoking within the following three months. These results indicated that health or social reasons alone were not related to the likelihood that a smoker anticipated stopping; across all levels of likelihood to quit, between 10 % and 30 % of respondents cited either health or social reasons to quit. However, respondents who perceived that they were very likely to stop smoking in the near future had a significantly higher rate of acceptance of both health and social arguments (50 % to 60 %). In our study a combination of health and social reasons was a better predictor of success in stopping smoking than social but not health reasons alone.

This finding has important implications for tobacco control campaigns. Despite the temptation to use messages that emphasise stopping smoking to protect the health of family and friends, an anti-smoking campaign should not forget that such a major change in behaviour is more likely to be successful if the person thinks that their personal health will benefit as well. Although factors motivating smoking cessation in the mid-1980s might have changed by the early 1990s, our results should provide a benchmark for comparisons with future surveys and allow for the assessment of the effects of ongoing public health efforts to motivate smoking cessation.

1 Pierce JP, Fiore MC, Novotny TN, Hatziandreu EJ, Davis RM. Trends in cigarette smoking in the United States: projections to the year 2000. *JAMA* 1989; **261**: 61–5.
2 US Public Health Service. *Promoting health/preventing disease: year 2000 objectives for the nation.* Rockville, Maryland: Department of Health and Human Services, 1989; 59.
3 US Department of Health and Human Services. *Reducing the health consequences of smoking: 25 years of progress. A report of the Surgeon General, 1989.* Atlanta, Georgia: Centers for Disease Control, Office on Smoking and Health, 1989. (DHHS Publication No (CDC) 89-8411.)
4 Wilson DM, Taylor W, Gilbert JR, et al. A randomized trial of family physician intervention for smoking cessation. *JAMA* 1988; **260**: 1570–4.
5 Kottke TE, Brekke ML, Solberg LI, Hughes JR. A randomized trial to increase smoking intervention by physicians: doctors helping smokers, round 1. *JAMA* 1989; **261**: 2102–6.
6 Hunt WA, Barnett LW, Branch LG. Relapse rates in addiction programs. *J Clin Psychol* 1971; **27**: 455–6.
7 Rigotti NA, Singer DE, Mulley AG, Thibault GE. Smoking cessation following admission to a coronary care unit. *J Gen Intern Med* 1991; **6**: 305–11.
8 Schwartz JL. *Review and evaluation of smoking cessation methods: the United States and Canada, 1978–1985.* Bethesda, Maryland: Department of Health and Human Services, 1987. (DHHS Publication No (NIH) 87-2940.)
9 Pierce JP. Progress and problems in the international public health effort to reduce tobacco usage. *Ann Rev Public Health* 1991; **12**: 383–400.
10 Becker MH, Haefner DP, Kasl SV, Kirscht JP, Maiman

LA, Rosenstock IM. Selected psychosocial models and correlates of individual health-related behaviors. *Med Care* 1977; **15** (suppl 5): 27–46.

11 Rosenstock I, Kirscht JP. Why people seek care. In: Stone G, Alder F, Cohen N, eds. *Health psychology*. San Francisco, California: Jossey-Bass, 1979: 161–88.

12 Bandura A. *Social foundations of thought and action: a social cognitive theory*. Englewood Cliffs, New Jersey: Prentice-Hall, 1986: 1–46.

13 Bal DG, Kizer KW, Felton PG, Mozar HN, Neimery D. Reducing tobacco consumption in California: the development of a statewide anti-tobacco use campaign. *JAMA* 1990; **12**: 1570–4.

14 Collishaw NE, Kaiserman MJ, Rogers B. Monitoring effectiveness of Canada's health-oriented tobacco policies. In: Durston B, Jamrozik K, eds. *Tobacco and health 1990: the global war*. Perth: Health Department of Western Australia, 1990. (Proceedings of the seventh world conference on tobacco and health.)

15 National Center for Health Statistics. *Current estimates from the health interview survey. Series 10, No 166*. Hyattsville, Maryland: Department of Health, Education, and Welfare, 1987.

16 Massey JT, Moore TF, Parson V, Tadros W. *Design and estimation for the national health interview survey, 1985–94*. Hyattsville, Maryland: National Center for Health Statistics, 1989. (Vital and health statistics; Series 2; No 34.)

17 Fingerhut LA, Kleinman JC, Kendrick JS. Smoking before, during, and after pregnancy. *Am J Public Health* 1990; **80**: 541–4.

18 Research Triangle Institute. SUDAAN Professional Software for SUrvey DAta ANalysis. Research Triangle Park, North Carolina: Research Triangle Institute, 1989.

19 Tobacco Institute. *The tax burden on tobacco. Historical compilation, 1990*. Washington, DC: Tobacco Institute, 1991: vii.

20 Nisbett R, Ross L. *Human inference: strategies and shortcomings of social judgement*. Englewood Cliffs, New Jersey: Prentice-Hall, 1980: 200–1.

21 US Department of Health and Human Services. *The health benefits of smoking cessation: a report of the Surgeon General, 1990*. Atlanta, Georgia: Centers for Disease Control, Office on Smoking and Health, 1990. (DHHS Publication No (CDC) 90-8416.)

22 Gilpin E, Pierce J, Goodman J, Giovino G, Berry C, Burns D. Trends in physicians giving advice to stop smoking, United States, 1974–87. *Tobacco Control* 1992; **1**: 31–6.

23 Fiore MC, Novotny TE, Pierce JP, Hatziandreu EJ, Patel KM, Davis RM. Trends in cigarette smoking in the United States: the changing influence of gender and race. *JAMA* 1989; **261**: 49–55.

24 Fiore MC, Novotny TE, Pierce JP, *et al*. Methods used to quit smoking in the United States: do cessation programs help? *JAMA* 1990; **263**: 2760–5.

25 Pierce JP, Fiore MC, Novotny TE, Hatziandreu EJ, Davis RM. Trends in cigarette smoking in the United States: educational differences are increasing. *JAMA* 1989; **261**: 56–60.

26 Swenson I, Dalton J. Reasons for smoking cessation among a random sample of North Carolina nurses. *Women and Health* 1983; **8**: 33–41.

27 Pierce JP, Dwyer T, Chamberlain A, Aldrich RN, Shelly JM. Targeting the smoker in an anti-smoking campaign. *Prev Med* 1987; **16**: 816–24.

Translations of abstract

Les raisons avancées par les fumeurs pour arrêter de fumer: ont-elles un rapport avec le succès de leur démarche?

Elizabeth Gilpin *et al*

Résumé

Objectif: Déterminer la fréquence et la variété des raisons pour lesquelles les fumeurs arrêtent de fumer, et examiner si certaines raisons sont associées avec de plus grandes chances de succès.

Méthode: Analyses à une variable et à plusieurs variables des raisons d'arrêter de fumer par caractéristiques démographiques, succès par caractéristiques démographiques, et succès de l'abandon de la cigarette par raisons données pour arrêter de fumer (en ajustant pour les variables démographiques).

Sujets: 3788 fumeurs et ex-fumeurs qui ont arrêté de fumer dans les cinq années précédant l'enquête de 1987 de la National Health Interview (Cancer Control Supplement), une enquête parmi la population adulte non-institutionnalisée aux Etats-Unis.

Base d'évaluation: Raisons pour arrêter de fumer et le pourcentage de personnes ayant réussi à arrêter de fumer (n'ayant plus fumé depuis au moins un an à la date du sondage).

Résultats: Les personnes interrogées ont le plus souvent déclaré qu'ils ont arrêté pour des raisons de santé (raisons de santé, 62%; raisons sociales, 22%; coût, 9%; perte du désir, 5%). D'importantes relations ont été observées entre les facteurs démographiques et les raisons citées et entre les facteurs démographiques et le fait d'avoir réussi à arrêter de fumer. Après ajustement des différences entre les variables démographiques liées au succès de la cessation tabagique, les fumeurs qui ne citaient que les raisons de santé, sociales, ou de coût, avaient plus ou moins la même chance de succès. Cependant, les fumeurs qui citaient à la fois les raisons de santé et les raisons sociales avaient plus de chance d'arrêter de fumer que ceux qui citaient uniquement des raisons sociales ou de coût, mais leur chance de succès n'était pas supérieure à celle des personnes qui ne citaient que des raisons de santé ou de perte de désir.

Conclusion: Même si l'on a de plus en plus insisté sur l'acceptabilité sociale du tabagisme au cours des campagnes contre le tabagisme il faut continuer à accorder une place importante au message relatif à la santé. Les fumeurs qui citent une raison sociale pour arrêter de fumer ont plus de chance d'arrêter de fumer avec succès s'ils ont, en même temps, l'impression de cesser de fumer pour leur propre santé.

Razones que los fumadores dan para dejar de fumar: ¿se relacionan con el éxito en dejar el tabaquismo?

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Resumen

Objetivo: Determinar la frecuencia y la distribución de las razones que los fumadores dan para dejar de fumar, y si algún tipo de razón se asocia con una mayor probabilidad de éxito que las otras.

Diseño: Análisis univariado y multivariado de las razones para dejar de fumar según las características demográficas, el éxito en dejar el tabaquismo según las características demográficas y el éxito en dejar el tabaquismo según las razones para dejarlo (con ajuste para variables demográficas).

Sujetos: En total, 3 788 fumadores actuales y exfumadores que habían dejado el tabaquismo en los cinco años anteriores a la entrevista, de la Encuesta Nacional de Salud de 1987 (Suplemento de Control del Cáncer), un estudio de población de adultos no institucionalizados en los Estados Unidos.

Medidas de resultado principales: Las razones para dejar el tabaquismo y el porcentaje de los que tuvieron éxito (por lo menos un año de abstinencia en el momento de la encuesta).

Resultados: Los entrevistados mencionaron con mayor frecuencia las razones de salud como un factor de motivación (razones de salud, 62%; razones sociales, 22%; costo, 9%; pérdida del deseo, 5%). Se encontraron relaciones importantes entre los factores demográficos y las razones citadas, y también entre los factores demográficos y el éxito en dejar el tabaquismo. Después del ajuste para las variables demográficas relacionadas con el éxito en dejar el tabaquismo, los fumadores que citaban solo razones de salud, sociales o de costo tuvieron aproximadamente la misma probabilidad de éxito. Sin embargo, los fumadores que citaban una combinación de razones de salud y razones sociales tenían una probabilidad mayor de dejar el hábito con éxito que los que aducían solo razones sociales o de costo, pero esa probabilidad no fue mucho mayor comparada con la de los que mencionaron solo razones de salud o pérdida del deseo.

Conclusión: Aunque la aceptabilidad social del tabaquismo se ha venido recalcando cada vez más en la campaña contra el tabaquismo, el mensaje de salud debe continuar desempeñando el papel protagónico. Los fumadores que citan una razón social para dejar el hábito tienen mayor probabilidad de éxito si creen que lo están haciendo también por su propia salud.

The Chinese translation will be published in the next issue.