

Independent  
Study  
On  
Program  
Effectiveness



This report was prepared by the Davis-Valente Group in cooperation with the Johns Hopkins University.  
(NOTE: Graphs have been removed to increase Internet load time.)



## Evaluating the Effectiveness of **SMOKENDERS**:

### Analysis of Recent Graduates from the **SMOKENDERS** Program

November 1997

#### Executive Summary

This paper reports results from an evaluation of the effectiveness of **SMOKENDERS** on smoking cessation among **SMOKENDERS** graduates. The results, based on telephone interviews with **SMOKENDERS** graduates, show that the program was extremely effective at helping participants quit smoking. At the time of the interview, 81% of the individuals who completed the program over the last three years were able to quit successfully for some period of time. Moreover, of the respondents who had quit and had graduated more than a year ago, 46% had been non-smoking for over one year. Thirty-eight percent of those interviewed remain smoke-free.

Only seven percent of those people contacted refused to participate in the interview thus indicating a willingness on the part of graduates to be interviewed. Most respondents liked the **SMOKENDERS** program and blamed themselves more than the program for their failure to quit. When compared to other smoking cessation techniques, an overwhelming majority rated **SMOKENDERS** as more effective and most respondents had tried numerous other techniques before **SMOKENDERS**.

Many felt that the most effective components of **SMOKENDERS** were the Packstraps, moderator/leader, and the use of nicotine-reducing filters. To improve **SMOKENDERS**, many respondents suggested periodical follow-

up contact. In sum, the program was considered quite effective by its participants, especially in comparison to other smoking cessation programs.

### **Introduction**

This paper reports the results of an evaluation conducted to determine how effective **SMOKENDERS**, a nationwide smoking cessation program, has been at getting its participants to quit smoking. This study consists of interviews with individuals who enrolled in **SMOKENDERS** at some time over the past three years. The interviews consisted of short (approximately four minutes), close-ended surveys conducted by trained interviewers.

A total of 250 interviews were conducted with individuals dispersed throughout the U.S., but predominately located in New York, California, and Washington, D.C. In studying the effectiveness rate of **SMOKENDERS**, we measured the degree **SMOKENDERS** participants quit smoking, perceived the effectiveness of different smoking cessation methods, as well as demographic characteristics.

Our most significant findings concern the reported rates of high smoking abstinence among **SMOKENDERS** participants. Moreover, we found that participants did not feel that nicotine substitution methods (i.e., the Patch and nicotine gum) were as effective as the **SMOKENDERS** program. We did not find that the **SMOKENDERS** program had differing effects for different demographic groups such as gender, ethnic, or age groups.

This report consists of the following sections:

- 1) literature review;
- 2) methodology detailing response rates and other data collection procedures;
- 3) qualitative results;
- 4) quantitative results;
- 5) limitations, discussion and conclusions.

We have attempted to answer the question: How effective is **SMOKENDERS**? Although there are certain limitations to the methods we have employed to answer this question, we have strived to be as objective as possible. In addition, meticulous attention has been paid to following the research procedures and has provided as objective an assessment of the effectiveness of **SMOKENDERS** as possible without conducting a clinical trial.

### **Literature Review**

Although smoking prevalence in the United States is at its lowest level in 50 years (Garfinkel, 1997), it is still a major public health concern today. Recent analysis of trends among cohorts reveals a drop in smoking prevalence during the past 30 years and confirms recent trends in smoking reduction (Birkett, 1997), but the prevalence rate is still higher among men than women, and higher among blacks than whites (Garfinkel, 1997).

In the United States today there are more smokers contemplating quitting smoking than in any other country, with almost 40% of current smokers contemplating quitting, with another 20% preparing to quit (Etter, Perneger, & Ronchi, 1997). Much of the current smoking cessation efforts, though,

have been focused on nicotine-replacement therapies such as nicotine gum and the nicotine patch, as well as alternative therapies such as hypnosis and acupuncture. Recent results, though, indicate that neither nicotine gum nor acupuncture has sustained effects, with only about a 10% sustainability rate after one year, dropping to about 6% after four years (Clavel-Chaplon, Paoletti, & Benhamou, 1997).

The highest rates of cessation have been found instead in the one-on-one outreach programs and self-help/support groups (Bobo & Davis, 1993; Heirich, Erfurt, Foote, & Gregg, 1989). In these programs, availability of social support (Fisher, et al., 1994), peer support (Stewart, et al., 1996), and buddy programs (Kviz, et al., 1994) were found to be extremely beneficial to smoking cessation and abstinence.

In a study of worksite smoking cessation programs, Fisher, et al. (1994) found that those smokers who participated in worksite programs had cessation rates between 21%-41% after 12- and 24-month follow-ups, compared to only 10%-25% rates for non-program participants.

Since most workplaces now have non-smoking policies, many have begun smoking cessation outreach programs for their employees. Although these programs can be costly, the benefits outweigh the costs dramatically. Specifically, organizations typically have reduced costs in insurance rates, less absenteeism, and fewer disabilities (Weiss, et al., 1984). One of the shortcomings of worksite cessation programs to date is that they are usually targeted at larger organizations with more white-collar employees, whereas smoking prevalence is higher among blue-collar employees of smaller organizations (Sorensen, et al., 1990).

## **SMOKENDERS**

**SMOKENDERS** is a nationwide organization that has provided smoking cessation programs since 1969. The **SMOKENDERS** program is a highly-structured systematic technique that emphasizes positive reinforcement and behavioral modification rather than negative or adverse approaches.

The program addresses every aspect of the smoking problem, including physical and psychological addiction, health implications, and the many sociological factors that cause people to smoke. The course employs a number of methods including motivational moderators, group support, delay techniques, log books, and the use of "pack straps" to increase the client's awareness of each cigarette smoked.

### **Methodology**

Nine different interviewers were hired to conduct the interviews. Interviewers completed between seven and 50 interviews each. The interviews were conducted between October and November, 1997.

Approximately 700 (N=806) name and phone numbers of **SMOKENDERS** graduates were obtained from the participant rosters. Each number was called and the date and time of the phone call was logged. The outcome of each call was logged in one of the following categories:

completed interview

number not in service

busy number

no answer

respondent refused to participate

voice mailbox or answering machine (interviewer left message)

request to call back later

Of the 806 phone numbers provided, the following distribution of outcomes was obtained:

250 (31.0%) completed interviews

167 (20.7%) numbers not in service

15 (1.9%) busy numbers

181 (22.5%) no answers

18 (2.2%) respondents refused to participate

99 (12.3%) voice mailboxes or answering machines that were not eventually contacted

73 (9.1%) requests to call back later that were not eventually contacted

Several different response rates can be calculated from these numbers. The first is the gross response rate which is simply the percentage of completed interviews obtained from the total number of phone numbers provided, 31.0%.

This number, though, includes phone numbers that were not in service, busy numbers and no answers all of which serve to diminish the response rate but do not represent valid interview attempts. When these cases are removed, the actual response rate becomes 56.4% (250/443).

Again, this number also includes cases in which the phone attempt (1) reached a respondent who was deceased, (2) reached a voice mail or answering machine and the interviewer left a message, or (3) reached a person who agreed to be interviewed but at another time, but could not be completed within the time frame allotted for interviewing. Again these do not represent interview refusals, but rather reflect attempts at an interview that did not result in communication. Once these cases are removed from the dataset, the response rate becomes 93.3% (250/268). In essence, there were very few (18) actual refusals to participate in the interview. This high response rate is perhaps an indicator of the high regard respondents feel about **SMOKENDERS** since they were willing to be interviewed

Even respondents who did not quit smoking with **SMOKENDERS** were willing to be interviewed and often chastised themselves, not **SMOKENDERS**, for not being able to quit (see below).

#### **Qualitative impressions**

Many respondents engaged our interviewers in lengthy discussions about their perceptions of **SMOKENDERS** and smoking cessation in general. The overall majority of respondents, both non-smokers and current smokers,

were overwhelmingly positive about **SMOKENDERS**. Even people who did not quit smoking spoke of what a wonderful program it was and were more apt to blame themselves for not quitting.

The following statements are just a sampling of what was recorded by the interviewers:

One of the best programs--[R] had temptations after 1-2 months--the fight stays with you (52 year old female non-smoker).

Absolutely 100% best program in US -- deals with issues! Would have been better if could have had follow-up every few months and a better moderator. Moderator should be counseling all the way through the process. (44 year old male current smoker).

Group support was helpful at first, but fell off after awhile (after the program). [R] was skeptical about the moderator, but the gimmicks really helped (45 year old male, non-smoker).

Fabulous program! (40 year old male, non-smoker).

Fabulous program--no follow-up was a problem--[R] felt that if you messed up then it's your problem--"hang in there" is not enough-- a little follow-up would be incredible-- moderator went too fast with the book -- a lot was not checked [completed] in second book-- some instructors should be monitored more (34 year old female, current smoker, second time **SMOKENDERS** graduate).

Less nicotine at beginning of **SMOKENDERS** was most effective way to ease you into it (52 year old male, current smoker).

Most helpful method was gradual reduction of nicotine intake by cigarette brand--weaning. Would have rated that as 5 in methods (47 year old female, current smoker).

This is no scam--This is a bonafide non-smoking program (45 year old male, non-smoker).

If there were any negative comments, they were usually about the difficulties of living with a spouse who has not quit ("husband's a chimney" said one 48 year old female); or because the program was not appropriate for the respondents:

Said a 51 year old male: "Not good for pipe smokers-- nothing specific to help, although moderator did try to come up with some gimmicks."

Another respondent stated that since she was already smoking the lowest level of nicotine cigarette it made it difficult to quit with **SMOKENDERS** because the program tries to get your nicotine down and respondent had no where to go.

Overall, the response was very positive. The most often mentioned change suggested was more follow-up, especially during the one to three months after graduation, and then throughout the following year.

**Results**

Table 1 reports the basic demographic characteristics of our sample. Of the 250 respondents for whom we have data on, slightly more than half were female (56.54%). Respondents were about evenly split among the three age categories of less than 40, between 40 and 50, and older than 50. The average age was 44.7 years with a standard deviation of 11.7 years (range 18 to 76 years). Thus, our sample represents predominantly middle-aged adults. Note that female respondents tend to be younger than male respondents (42% of women respondents are less than 40 while only 22% of male respondents are).

Table 1. Demographic characteristics for the sample.

Characteristic	% (n)	Males	Females
<u>Gender</u> Male	43.5 (103)	100%	100%
Female	56.5 (134)		
<u>Age (%)</u> 18-39	33.2 (78)	22.3%	42.0%
40-49	35.7 (84)	42.7%	30.5%
50+	31.1 (73)	35.0%	27.5%*
<u>Education (%)</u>			
Less than HS	1.3 (3)	1.0	1.5
HS	26.4 (62)		
Some College		22.3	29.0
College Graduate	30.2 (71)		
		27.2	32.8
	23.0 (54)		
		25.2	21.4
	19.1 (45)		
		24.3	15.3
<u>Income</u> Less than \$30k	14.3 (32)	7.1	19.8
\$30k - \$40k	12.9 (29)	14.3	
\$40k - \$50k	16.1 (36)	13.3	
\$50k - \$75k	22.3 (50)	32.5	
\$75k+	34.4 (77)	41.8	11.9
			18.2
			21.4
			28.6
<u>Ethnic Category</u>			
White	86.3 (202)	86.3	86.3
Black	8.6 (20)	3.7	3.9
Other	5.1 (12)	8.6	24.6

p<.05; \*p<.01; \*\*p<.001

Just about all of the respondents have at least a high school education and more than 70 percent have at least some college. There was no difference in educational attainment between the men and women of our sample. Our respondents, then, are fairly well educated. Our respondents report higher than average incomes. Most, 56.7 percent, report incomes above \$50k. There was no statistical difference between the income levels reported for men and women. Our sample was predominantly white (86.3% with about

nine percent black and five percent either Hispanic or Asian). The percentages are not unlike those in the US population in general.

In sum, our sample looks surprisingly like a cross-section of the U.S. population. The average respondent is a white middle-aged male with a college education and a good income, while the sample as a whole seems to represent a cross-section of middle-class men and women in the U.S. trying to quit smoking at some point in the relatively recent past.

Table 2 reports the degree that respondents reported that they quit smoking with **SMOKENDERS**. Of the 239 respondents for whom we collected data on this question, most said that they quit completely, 38.1 percent, or said that they quit temporarily, 43.1 percent. This high level of smoking cessation as a result of the program is commendable and is much higher than has been obtained in other smoking cessation programs.

**Table 2.** Demographic characteristics associated with smoking cessation by cessation category.

	Total (n=246)	Did not Quit (n=46)	Quit For Some Time (n=107)	Quit Completely (n=93)
Total	100%	18.7%	43.5%	37.8%
<u>Gender</u>				
Male		18.0	44.0	38.0
Female		15.0	45.9	39.1
<u>Age</u>				
18-39		19.5	45.5	35.1
40-49		15.9	46.3	37.8
50 +		12.5	41.6	45.8
<u>Education</u>				
Less than HS		0	33.3	66.7
HS		19.7	31.2	49.2
Some College		14.3	45.7	40.0
College		13.5	53.9	32.7
Graduate		17.8	51.1	31.1
<u>Income</u>				
Less than \$30k		31.3	46.8	32.9
\$30k - \$40k		6.9	55.2	37.9
\$40k - \$50k		11.4	45.7	42.9
\$50k - \$75k		20.4	34.7	44.9

\$75k +		13.3	49.3	37.3
<u>Ethnic Category</u>				
White		16.2	46.0	37.8
Black		15.0	35.0	50.0
Other		8.3	41.7	50.0

p<.05; \*p<.01; \*\*p<.001

Were cessation rates different by demographic group? In short, no. We found that women and men were just as likely to report quitting smoking with **SMOKENDERS**. Of the men, 38 percent quit completely while 39.1 percent of the women reported doing so. Of the men, 44 percent quit for some time while 45.9 percent of the women reported doing so. Thus, there were no differences in quitting by gender.

Similar patterns hold for age, educational attainment, income category and ethnicity, namely, that self-reported cessation rates were the same between different levels of each of these variables. This indicates that **SMOKENDERS** was not differentially effective for demographic characteristics. In sum, both men and women, younger and older, less and more educated, lower and higher levels of income, and white and black respondents reported the same level of smoking cessation.

Table 3 reports the cessation status for our sample. Of the 246 respondents, 37.8 percent (93 respondents) stated that they had quit smoking completely with **SMOKENDERS**. Another 43.5 percent (107 respondents) stated that they had quit smoking for some time (meaning that they had quit for at least one day, but had started smoking again since that time) with **SMOKENDERS**. Of the 43.1 percent who said that they quit for some time, 46.5 percent of those stated that they had quit for more than three months, while another 26.3 percent had quit for two to three months. Of particular interest in this table is that 56.5% of the respondents were smoke-free for three months or more (n=139).

Table 3. Cessation status and duration (n = 246).

Quit Smoking Completely	37.8% (93)		
Quit Smoking For Some Time	43.5% (107)		<u>% (n)</u>
		Less than One Month	27.3 (27)
		One to Two Months	9.1 (9)
		Two to Three Months	17.2 (17)
		More than Three Months	<u>46.5 (46)</u>
			100% (99)
Did Not Quit	18.7% (46)		
Total	100% (246)		

Moreover, of the respondents who had quit and had graduated more than a year ago, 46% had been non-smoking for over one year. [Note: because this data is right-censored, meaning that many of the respondents had only recently graduated from the program, we do not have full and accurate information on all of the respondents.

Table 4 reports cessation rates for different smoking behavior characteristics. Surprisingly, none of the smoking behavior characteristics was associated with quitting. For example, on average respondents started smoking when they were 16.8 years of age. Quitters started smoking when they were 16.8 years old while those that did not quit started smoking when they were 17 years old (a non-significant difference statistically and substantively). On average, our respondents smoked 33 cigarettes a day at their peak of smoking. This number was about the same for both quitters and non-quitters.

There was no difference between quitters and non-quitters for the age when the respondent first attempted to quit (32.4 years) and the age at when he/she first enrolled in **SMOKENDERS** (42.1). Non-quitters have attempted to quit on average 3.6 times in the past while those who quit temporarily have attempted 5.6 times and quitters had attempted 8.1 times in the past. This difference, while not statistically significant does seem to have implications for program implementation, namely, that those who have attempted to quit often seem to be more motivated to quit and **SMOKENDERS** seems to work better. It's almost as if you can say "You've tried all the other methods and tried often, now try **SMOKENDERS**."

Table 4. Smoking characteristics by cessation category.

	Total (n=235)	Did not Quit (n=35)	Quit For Some Time (n=105)	Quit Completely (n=91)
Age began smoking	16.8	17.5	16.7	16.7
# of cigarettes per day	33.0	35.6	31.9	33.2
Age first attempted to quit	31.7	32.4	31.0	32.1
Age first enrolled in <b>SMOKENDERS</b>	41.7	40.7	40.7	43.2
# of times attempted to quit	7.0	7.6	5.8	8.2
Months gone w/o smoking	22.4	20.4	18.7	28.4

p<.05; \*p<.01; \*\*p<.001