

Trends in cigar smoking and perceptions of health risks among Massachusetts adults

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Objective: To track trends in cigar smoking and assess perceptions of cigar related health risks among Massachusetts adults.

Design: A random digit dial telephone survey conducted in 1993 and a subsequent monthly random digit dial survey conducted March 1995 to June 2000.

Participants: 4733 adults who completed the 1993 survey and 14 868 adults who completed the monthly survey between 1995 and 2000.

Main outcome measures: Trends in current and experimental cigar use and perceptions of health risks.

Results: Current cigar usage increased significantly among men aged 18–34 years between 1993 (5.8%) and 1997–98 (18.2%), but began to decrease in 1999–2000 (13.5%). Young men were much more likely than older men or women of any age to have experimented with cigars in the year before interview, but this trend appears to have decreased slightly since 1998. Young male cigar smokers were increasingly those who never smoked cigarettes. Former cigarette smokers were not smoking cigars in greater numbers. Cigar smokers were roughly three times as likely as those who do not smoke cigars to believe cigars are a safer alternative to cigarettes, and that perception did not appear to change much over time.

Conclusion: Cigar usage increased dramatically among young men in Massachusetts in conjunction with national increases in sales and marketing of cigars, but now appears to be decreasing.

A generation ago, cigar smoking was a declining trend. Prevalence rates fell immediately following the enactment of a 1973 ban on television and radio small cigar advertisements, and continued to decline steadily over subsequent years.¹ Then, two decades later, a startling reversal became apparent. Cigar sales in the USA between 1993 and 1998 increased by almost 50% to 4.5 billion. Substantial increases in the prevalence of cigar use were noted following 1996.¹

The sudden increase in the prevalence of cigar use attracted the attention of the Federal Trade Commission (FTC), which in 1998 ordered five major cigar manufacturers to issue reports detailing sales and advertising/promotional expenditures for 1996 and 1997.² The companies reported a 32% increase in advertising and promotional expenditures over the two year period, from \$30.9 million to \$41 million. The FTC report stated that "the dramatic increase in cigar use in America has occurred in tandem with the increase in promotional activities surrounding cigar smoking" (page 2 of press release). The FTC also cited significant increases in the number of brands being marketed (up 54% in 1997) and sold (up nearly 41%).² Noting that people appear poorly informed about the risks associated with cigar smoking, the FTC recommended that health warning labels be placed on cigar packages.

Tobacco control researchers and media journalists shared an interest in understanding the nature of the sudden increase. Preliminary studies indicated unprecedented numbers of underage smokers choosing cigars.³ Politicians and celebrities were featured in new magazines like *Cigar Aficionado*, and cigars were somehow managing to garner overwhelmingly positive media attention.⁴ Instead of focusing on the potential hazards of cigar smoking, journalists began chronicling the curious genesis of a glamorous new cigar culture and tended to portray cigar smoking in a favourable light.^{4,5}

The level of success of recent cigar marketing strategies can be measured not only by sales figures, but also by behavioural and attitudinal trends assessed before, during, and after the course of these commercial phenomena. In this paper we present the cigar smoking prevalence rates for a sample of

Massachusetts adults between 1993 and the first half of 2000. Specifically, this paper explores trends in usage and experimentation by demographic characteristics, the potential relation between cigarette and cigar smoking, including the possibility that cigarette smokers may be switching to cigars, and perceptions of health risks associated with cigar smoking. It addresses the following questions:

- (1) Have the cigar smoking rates of Massachusetts adults changed during the period of high levels of marketing?
- (2) If so, are particular populations more vulnerable?
- (3) Are the cigar smokers new tobacco users or have they moved on from cigarette smoking?
- (4) How are the risks of cigar usage perceived?

METHODS

Sample

Since the implementation of the Massachusetts Tobacco Control Program in 1993, The Center for Survey Research at the University of Massachusetts, Boston has been collecting data on the evolving tobacco related attitudes and behaviours of adults and teenagers across the state. The Massachusetts Tobacco Survey (MTS), conducted in 1993, supplied baseline data for both youth and adults on their prevailing beliefs and practices at the programme's initiation. The Massachusetts Adult Tobacco Survey (MATS) began in 1995 and continued through to December 2000, surveying approximately 225 adults each month on various programme and policy related topics. Both the MTS and MATS are random digit dial telephone surveys that feature two distinct components. The first, a brief interview with any one adult in the household, enumerates the adults in each household and provides demographic and smoking status information for each adult. From

Abbreviations: FTC, Federal Trade Commission; MATS, Massachusetts Adult Tobacco Survey; MTS, Massachusetts Tobacco Survey

Table 1 Trends in percentages of cigar smoking by sex and age

Age (years)	Sex: cigar smoking	MTS: 1993 (n=4733)		MATS: 1995-96 (n=4929)		MATS: 1997-98 (n=5690)		MATS: 1999-2000* (n=4249)	
		%	±CI	%	±CI	%	±CI	%	±CI
18-34	Men: pipe/cigar smoker	5.8	3.0	11.5	5.7	18.3	5.8	13.6	6.3
	Men: cigar smoking	5.8†		11.5†		18.2	5.8	13.5	6.3
	Women: pipe/cigar smoker	1.2	1.2	1.1	1.7	1.1	0.9	2.5	2.4
	Women: cigar smoker	1.2†		1.1†		1.1	0.9	2.5	2.4
35-49	Men: pipe/cigar smoker	9.6	4.1	11.1	4.9	9.8	3.8	13.9	5.5
	Men: cigar smoker	9.3†		10.8†		9.5	3.8	13.8	5.5
	Women: pipe/cigar smoker	0.7	0.8	1.6	1.8	1.2	1.4	0.2	0.2
	Women: cigar smoker	0.7†		1.6†		1.2	1.4	0.1	0.1
50+	Men: pipe/cigar smoker	9.6	5.6	6.3	3.6	4.8	3.3	8.7	4.7
	Men: cigar smoker	6.4†		4.2†		2.9	2.8	8.2	4.6
	Women: pipe/cigar smoker	0.9	0.9	1.4	1.4	0.3	0.4	0.1	0.1
	Women: cigar smoker	0.9†		1.4†		0.3	0.4	0.1	0.1

All percentages are weighted to adjust for sampling design. Ns are unweighted.

*First half of 2000 only.

†Estimated by deducting approximate number of pipe smokers. There were virtually no pipe smokers among the 18-34 year old group.

MATS, Massachusetts Adult Tobacco Survey; MTS, Massachusetts Tobacco Survey; CI, 95% confidence interval.

this interview, one adult is then randomly selected to be interviewed in depth. The MTS employed an additional oversampling strategy, whereby smokers and minorities were oversampled, while MATS did not employ the oversampling procedure. Response rates for MTS were 78% for the household interview and 78% for the in-depth interview. For MATS, response rates for the household interview have ranged from 68-76% and for the in-depth interview have been between 79-81%.^{6,7}

Measures

Cigar smoking prevalence and experimentation

Both the MTS in 1993 and the ongoing MATS included a question designed to estimate the smoking prevalence of non-cigarette forms of tobacco. The question mirrored that used to determine current cigarette smoking prevalence and was worded as follows: "Do you now smoke a pipe, cigar, or cigarillos, every day, some days, or not at all?" In order to focus solely on the prevalence of cigar and cigarillo smoking, in December of 1996 a question was added to help distinguish these from pipe smoking: "Which of these tobacco products do you use?" Using this question, estimated proportions of pipe smoking (according to sex and age) were removed retrospectively from data that was collected before the introduction of the new question. These estimated proportions of pipe smokers were compared across the years for which there existed data (1997-2000) in order to determine the stability of the estimates. Proportions of pipe smokers in each demographic group were deemed very stable across these years of data collection, lending support to the rationale for applying them to data collected in prior years. Beginning in December of 1996, a question was inserted before the questions on current cigar smoking: "In the past 12 months, have you tried smoking a cigar—even a puff?" Respondents answering "yes" to this question were classified as having at least experimented with cigar smoking in the prior year.

Cigarette smoking prevalence

Determination of cigarette smoking prevalence followed established criteria: current smokers had smoked at least 100 cigarettes in their lifetime and smoked either "every day" or "some days" at the time of the survey; former smokers had also smoked at least 100 cigarettes in their lifetime, but smoked "not at all" at the time of the survey; and never smokers were those who had not smoked 100 cigarettes in their lifetime. This measure of smoking prevalence was used as a comparison characteristic of those who smoked cigars.

Perceptions of health risks

A measure of the perceptions of health risks was obtained by asking respondents, "Do you believe that switching from cigarettes to cigars reduces a smoker's chance of illness?" This question was also added in December of 1996 and was asked of all respondents.

Data analysis

All data were weighted and analyses were conducted using SUDAAN,⁸ in order to account for the complex stratified sampling design. Trends in cigar smoking were assessed using combined sample years, for the purpose of comparing similarly sized groups.

RESULTS

Trends in cigar smoking

Table 1 depicts trends in cigar smoking across time, by demographic predictors sex and age. As shown, there occurred a significant upward trend in use by young men (ages 18-34 years) between the years of 1993 and 1998; in fact, there was a tripling in the rate of current use over the course of six years (from 5.8% in 1993 to 18.2% in 1997-98). Following the 1997-98 period, however, there was a decrease, though not significant, in cigar use among young men (13.5% for the period between 1999 and the first half of 2000). In contrast to patterns among young men, cigar smoking prevalence for women was consistently very low and virtually unchanged across the years in question. Similarly, rates of usage for older men were found to be more stable and substantially lower than those for younger men. Aside from the increase in cigar usage by young men between 1993 and 1997-98, there were no other significant differences noted. It is also important to mention that the majority of the young men using cigars reported smoking them "some days" (98%) rather than "every day" (2%).

Cigarette smoking status of young male cigar smokers

Table 2 compares across time the cigarette smoking status of young, male cigar smokers. The percentage of cigar smokers who had never been cigarette smokers increased (from 23.3% in 1993 to 55.2% in 1999-2000), while the percentage of cigar smokers who were former cigarette smokers declined slightly (from 17.1% in 1993 to 9.4% in 1999-2000). Because of large confidence intervals, the differences between these estimates were not significant. The findings suggest that cigars were not

Table 2 Cigarette smoking status of cigar smokers: men 18–34 years

	MTS: 1993 Male cigar smokers 18–34 (n=56)		MTS: 1995–96 Male cigar smokers 18–34 (n=72)		MATS: 1997–98 Male cigar smokers 18–34 (n=123)		MATS: 1999–2000* Male cigar smokers 18–34 (n=62)	
	%	±	%	±	%	±	%	±
Never cigarette smoker	23.3	17.8	50.4	27.3	40.1	17.1	55.2	24.2
Former cigarette smoker	17.1	24.4	8.5	10.3	10.4	8.8	9.4	7.9
Current cigarette smoker	59.6	25.2	41.2	28.1	49.5	18.1	35.4	22.6

All percentages are weighted to adjust for sampling design. Ns are unweighted.

*First half of 2000 only. See footnote to table 1 for explanation of abbreviations.

being used increasingly as a substitute for cigarettes among those who had quit.

Experimentation

Results regarding levels of experimentation with cigars, by sex and age, are shown in table 3. Proportions were compared across time. Once again, young men appear to have been the primary experimenters, followed by their older counterparts. While slightly more than one in 10 young women admitted to experimenting with cigars, fewer older women reported this type of experimentation. In comparing trends across time, it appears that experimentation with cigars may be on the decline among young males (42.4% in 1997–98 *v* 35.6% in 1999–2000), but this change was not significant.

Perception of risk

Data collected between 1996 and 1999 were analysed by cigar smoking status, and results indicated a significant difference between the beliefs of cigar smokers and cigar non-smokers, with the former being three times as likely to believe cigars are a safer alternative to cigarettes (32.3% *v* 11.2%) ($p < 0.05$). Perceptions among cigar smokers were additionally examined by cigarette smoking status. Former cigarette smokers were shown to be much more likely to believe that cigars are a safer alternative to cigarettes (47.9%) than current cigarette smokers (22.9%) or those who have never smoked cigarettes (28.8%), though these differences are not significant at the 0.05 level.

DISCUSSION

Our results indicate that the recent glamorisation of cigars corresponds with an increase in both experimentation with, and current usage of, cigar products by young men in Massachusetts. The trend may have peaked in 1997–98. Current use of cigars rose from 5.8% in 1993 to 18.2% in 1997–98 among this group, constituting a highly significant increase ($p = 0.001$). Data collected in California in the years 1990 and 1996 show a similarly large increase in the proportions of young men currently using cigars during this time period.⁹

These increases have also been seen nationally among young men.¹ Interestingly though, while marketing has appeared to focus on both young men and women, women seemed to be more resistant to the lure of current cigar smoking. Though data show a small proportion of 18–34 year old women had experimented with cigars, these women did not display the same patterns of current usage that characterised men of the same age group. Fortunately, data collected since 1998 suggest that the explosive increase in cigar use among young men may be slowing, with prevalence figures for this group down to 13.5% for the period between 1999 and the first half of 2000. In addition, data on per capita consumption of cigars show a decrease for the entire US population, as well as for adult males, between 1999 and 2000.¹⁰

We thought it important to assess whether the cigarette smoking status of the young male cigar smoker had changed over time, as their numbers increased. Whether the new cigar smoker was a current, former, or never smoker of cigarettes is a variable crucial to understanding the nature of the cigar phenomenon. Analysis of the cigarette smoking status of the young male cigar smoker over time revealed that more of the new cigar smokers were those who had *never* smoked cigarettes (23.3% of the cigar smokers in 1993 *v* 55.2% of the cigar smokers in 1999–2000). In addition, a slight decline was revealed in the proportion of cigar smokers who were *former* cigarette smokers; an important finding that suggests cigarette smokers are not overwhelmingly turning to cigars as a substitute for cigarettes. Although the statistical power of these analyses is quite low because of small samples sizes of young male cigar smokers, the estimates are suggestive of trends for this population.

Though former cigarette smokers do not appear to be turning to cigars in increasing numbers, this situation does occur. An important question here concerns the potential for cigar smokers to view cigar smoking as a “safe” alternative to cigarettes. Since former or current cigarette smokers who smoke cigars have been shown to inhale more deeply than do those who have never smoked cigarettes,¹ and the health risks have been shown to be much greater with deeper inhalation,

Table 3 Trends in experimentation with cigars by sex and age

Sex, age	MATS: 1997–98 (n=5690)		MATS: 1999–2000* (n=4249)	
	%	±CI	%	±CI
Men 18–34	42.4	7.1	35.6	8.1
Women 18–34	15.8	4.7	11.2	4.2
Men 35–49	25.6	5.8	23.0	6.4
Women 35–49	5.3	2.8	4.1	2.5
Men 50+	11.8	5.1	12.8	5.5
Women 50+	1.5	1.5	0.2	0.2

Data shown are based on the question, “Have you ever tried smoking a cigar—even a puff—in the past 12 months?”, and were collected from samples between December 1996 and December 1999.

All percentages are weighted to adjust for sampling design. Ns are unweighted.

*First half of 2000 only. See footnote to table 1 for explanation of abbreviations.

What this paper adds

During the mid 1990s, cigar sales rose substantially in conjunction with an increase in cigar related promotional activities. Data collected in California in 1990 and 1996 revealed large increases in the proportion of young men using cigars on an ongoing basis during this period. The dramatic rise in use warranted further detailed examination of the cigar phenomenon in other geographic areas, as well as an assessment of cigar use trends after 1996.

This study looked specifically at Massachusetts adults to identify cigar usage trends and to examine perceptions of the health risks of cigar use. Results showed cigar use increased dramatically among young men in Massachusetts in conjunction with national increases in sales and marketing of cigars in the mid '90s, but appeared to be decreasing in subsequent years. Additional findings suggested that young men were much more likely than older men or women of any age to have experimented with cigars in the year before interview, up until 1998. When cigarette smoking status was considered, it was found that young male cigar smokers were increasingly those who never smoked cigarettes. Additionally, former cigarette smokers were not found to be smoking cigars in greater numbers. With regard to perceptions of health risks, cigar smokers were found to be about three times as likely as those who do not smoke cigars to believe that cigars are a safer alternative to cigarettes.

perceptions by cigar smokers of the safety of their cigar smoking are an important concern. Indeed, our results show cigar smokers to be three times as likely as those who do not smoke cigars to believe that switching from cigarettes to cigars reduces a smoker's chance of illness (32.3% v 11.2%), with former cigarette smokers the most likely among cigar smokers to believe that cigars are a safer alternative (47.9%). It will be important to continue monitoring trends in marketing and advertising of cigars over the next few years. This will allow for further examination of the links between activities of the cigar industry and population smoking patterns.

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