

Attitudes toward smoking

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Abstract

Objectives

This article examines socio-demographic variations in attitudes about the health effects of smoking, second-hand smoke, and the importance of smoke-free environments.

Data source

The data are from the Health file of the 1996/97 cross-sectional provincial household component of the National Population Health Survey, conducted by Statistics Canada. The sample consists of 60,260 respondents aged 12 or older.

Analytical techniques

Three smoking attitude scores were derived. Multivariate analyses were used to study how age, sex, educational attainment, province and smoking status were associated with attitude scores.

Main results

Smokers placed less emphasis than non-smokers on the health risks associated with smoking. Older Canadians, particularly smokers aged 65 and older, tended to have more lenient attitudes toward smoking, compared with younger age groups. Respondents with high school education or less held more lenient attitudes, compared with those with a university degree. Quebec residents were more tolerant of tobacco use than were residents of other provinces.

Key words

smoking cessation, smoke-free environments, passive smoking, tobacco

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The social acceptability of smoking has declined in North America since the 1960s,¹ when evidence first began to mount about the relationship between smoking and lung cancer and other diseases. In 1967, nearly half of Canadians were smokers.² Since then, the prevalence of smoking has declined. Nonetheless, in 1996/97, about a third of Canadians aged 12 or older smoked daily or occasionally. And while fewer Canadians are now smokers, the public health and economic impacts of tobacco are still enormous.³⁻⁸

Canadians have been exposed to more than 30 years of public health efforts to curb smoking. This includes the passage of legislation by all levels of government restricting smoking, both in response to and to promote a shift in norms and values related to tobacco use.

While health education theory and psychosocial models suggest that attitude change is a necessary precursor to behaviour change,^{9,10} it is also possible that behaviour changes like quitting or starting smoking have an influence on attitudes or that attitudes and behaviours change concurrently.¹¹ This article investigates socio-demographic

Methods

Data source

This article is based on Statistics Canada's National Population Health Survey (NPHS). The NPHS, which began in 1994/95, collects information about the health of the Canadian population every two years. It covers household and institutional residents in all provinces and territories, except persons living on Indian reserves, Canadian Forces bases, and in some remote areas. The NPHS has both a longitudinal and a cross-sectional component. Respondents who are part of the longitudinal component will be followed for up to 20 years.

This analysis of attitudes toward smoking uses cross-sectional data from cycle 2 of the NPHS, which was conducted in 1996/97. The data analyzed here pertain to the household population in the provinces.

The 1996/97 cross-sectional sample is made up of longitudinal respondents and respondents who were selected as part of sample buy-ins that were carried out in three provinces. The additional sample respondents were chosen with the random digit dialing (RDD) technique and were included for cross-sectional purposes only. Most of the data for cycle 2 were collected through computer-assisted telephone interviews.

Socio-demographic and some health information was obtained for each member of participating households. These data are found in the General file. In addition, in-depth health information was collected for one randomly selected household member. The in-depth health information, as well as the information in the General file pertaining to that individual, is found in the Health file.

In households belonging to the longitudinal component, the person providing in-depth health information about himself or herself for the Health file was the randomly selected person for that household in cycle 1 (1994/95) and was usually the person who provided information on all household members for the General file in cycle 2. In households belonging to the buy-in component, one knowledgeable person provided the socio-demographic and health information about all household members for the General file. As well, one household member, not necessarily the same person, was randomly selected to provide in-depth health information about himself or herself for the Health file.

Taking into account both household and selected person responses, the 1996/97 cross-sectional response rates for the Health file were 93.1% for the continuing longitudinal component and 75.8% for the RDD component, yielding an overall rate of 79.0%. A total of

81,804 respondents completed the questions for the Health file, of whom 73,402 were aged 12 or older.

This analysis began with the 73,402 persons aged 12 or older who completed the Health file interview in 1996/97. The sample size for the questions about smoking attitudes was slightly smaller because these questions were posed only to respondents who had indicated in an earlier question whether they smoked "daily," "occasionally" or "not at all" at the time of the interview. As well, respondents selected to augment the sample size in Alberta were not asked the questions about attitudes toward smoking. The resulting sample size for this analysis was 60,260. A more detailed description of the survey design, sample, and interview procedures can be found in published reports.^{12,13}

Analytical techniques

Attitudes toward smoking were analyzed as groups of related questions about smoking. Three attitude scores were derived to measure beliefs about: the *health effects of smoking*; the *health effects of second-hand smoke*; and the *importance of smoke-free environments* (see *Measuring attitudes toward smoking*).

Variations in smoking attitudes were assessed in a number of ways. Mean scores were compared by smoker type and by intention to quit. Multivariate analysis was used to estimate adjusted score means. Adjusted means were obtained by province and by the interaction of smoking status with each of age, sex and educational attainment.

The choices for explanatory variables were based on their hypothesized relationship to attitudes toward smoking. Research indicates that beliefs about the negative health effects of smoking and second-hand smoke were not as strong among older age groups, women, those with lower educational attainment and current smokers, and that attitudes toward smoking vary geographically.¹⁴⁻¹⁸

Multiple linear regression models were constructed to observe the statistical significance of the effects of each explanatory variable used to calculate adjusted means, along with selected interactions (Appendix Table A). Unadjusted means can be found in Appendix Table B.

Responses were weighted to represent the target population of the NPHS. Statistical significance was determined using a weighted bootstrap resampling procedure, which fully accounts for the design effect of the survey.

differences in attitudes toward smoking under the broad assumption that attitudes are associated with behaviour. The data are from the 1996/97 National Population Health Survey (see *Methods* and *Limitations*).

Smokers scored lower

Almost 90% of Canadians agreed that smoking is harmful, and more than three-quarters agreed that second-hand smoke can cause health problems in non-smokers. As might be expected, smokers' attitude scores were generally lower (more lenient) than those of non-smokers with regard to the health effects of smoking and second-hand smoke, and they placed less importance on smoke-free environments. Furthermore, there was a gradient in scores on all three attitude measures, with daily smokers scoring lower than occasional smokers who, in turn, scored lower than non-smokers (Chart 1). The only exception was the difference in scores for the health effects of smoking between occasional and non-smokers, which was not significant.

To some extent, these findings support earlier research in Ontario that showed never and former smokers to be more knowledgeable about the health

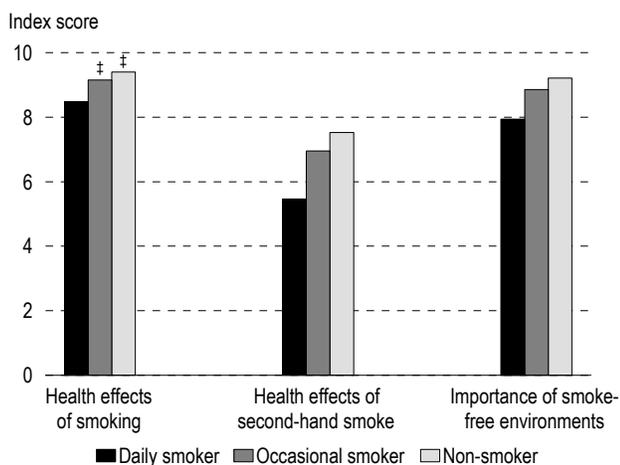
effects of smoking and second-hand smoke and more supportive of smoking restrictions.¹⁶

The largest differences among the three smoking status groups in the NPHS were in their attitudes about the health effects of second-hand smoke. Medical research on the negative effects of second-hand smoke and use of the findings in anti-smoking campaigns is relatively recent. Therefore, it may take more time, especially for smokers, to believe these messages.

It may also be that smokers downplay the negative effects of smoking to reconcile psychological conflicts that may arise between attitude and behaviour. The same may be true of people who are continually exposed to second-hand smoke. NPHS respondents who indicated that someone in their household smoked had lower attitude scores on the health effects of second-hand smoke and placed significantly less importance on smoke-free environments than did respondents in households with no smokers (data not shown).

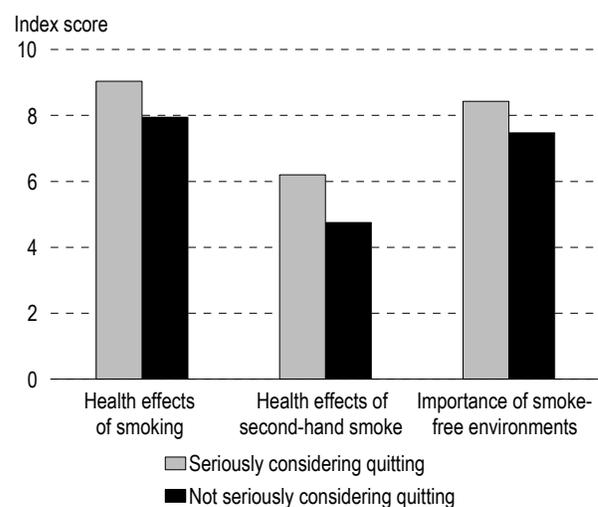
Some evidence from other research suggests that attitudes toward second-hand smoke may be changing. For example, a Toronto study found that, between 1983 and 1988, disparities in knowledge

Chart 1
Average scores for attitudes toward smoking,[†] by smoking status, Canada excluding territories, 1996/97



Data source: 1996/97 National Population Health Survey, Health file
[†] Higher scores indicate stronger anti-smoking attitudes.
[‡] The difference between these two scores is not significant at alpha = 0.05 (using the Bonferroni test for multiple comparisons).

Chart 2
Smokers' average scores for attitudes toward smoking,^{†‡} by quitting intentions, Canada excluding territories, 1996/97



Data source: 1996/97 National Population Health Survey, Health file
[†] Higher scores indicate stronger anti-smoking attitudes.
[‡] All differences between scores by quitting intention are significant at alpha = 0.05.

Measuring attitudes toward smoking

In this article, the term “attitude” refers to a summary of beliefs and opinions about smoking. The three smoking attitude scores were derived from the following NPHS items:

Health effects of smoking

- Smoking cigarettes can cause lung cancer in a smoker.
- Smoking cigarettes can cause heart disease or heart problems in a smoker.
- Smoking cigarettes can cause a stroke in a smoker.
- Smoking cigarettes can cause bronchitis, emphysema or asthma in a smoker.

Health effects of second-hand smoke

- Second-hand smoke can cause lung cancer in a non-smoker.
- Second-hand smoke can cause heart disease or heart problems in a non-smoker.
- Second-hand smoke can cause a stroke in a non-smoker.
- Second-hand smoke can cause bronchitis, emphysema or asthma in a non-smoker.

Importance of smoke-free environments

- Children who are exposed to second-hand smoke are more likely to suffer ill health and developmental problems than children who are not exposed to it.
- Pregnant women and others living with them should not smoke in the home during the pregnancy.
- Non-smokers should be provided with a smoke-free environment at work.
- Smokers should ask permission before smoking in the presence of others.

The response options for each question in the three groupings were “agree,” “disagree” and “no opinion.” Items were scored such that the higher the score, the more negative the attitude toward smoking. For example, respondents who agreed with “Smoking cigarettes can cause lung cancer in a smoker” scored 3, those who disagreed scored 1, and those with no opinion scored 2. Since each score was derived using four questions (where all four responses had to be valid), respondents could score between 4 and 12 on each measure. For ease of interpretation, the scores were re-scaled to be between 0 and 10.

Respondents were asked the first group of questions only if they answered “yes” to the filter question: “Do you believe that smoking cigarettes can cause health problems in a smoker?” The questions in the second group were posed only if the respondent answered “yes” to the filter question: “Do you believe that second-hand smoke can cause health problems in a non-smoker?” However, dropping respondents who answered “no” to these filter questions would bias the results. To keep those who did not recognize the dangers of smoking or of second-hand smoke in the analysis, a value of “disagree” was imputed to all four items in the corresponding group of questions. This affected 1,751 records (3%) with a valid *health effects of smoking* score and 6,674 records (14%) with a valid *health effects of second-hand smoke* score. There was no filter question for the third group of questions.

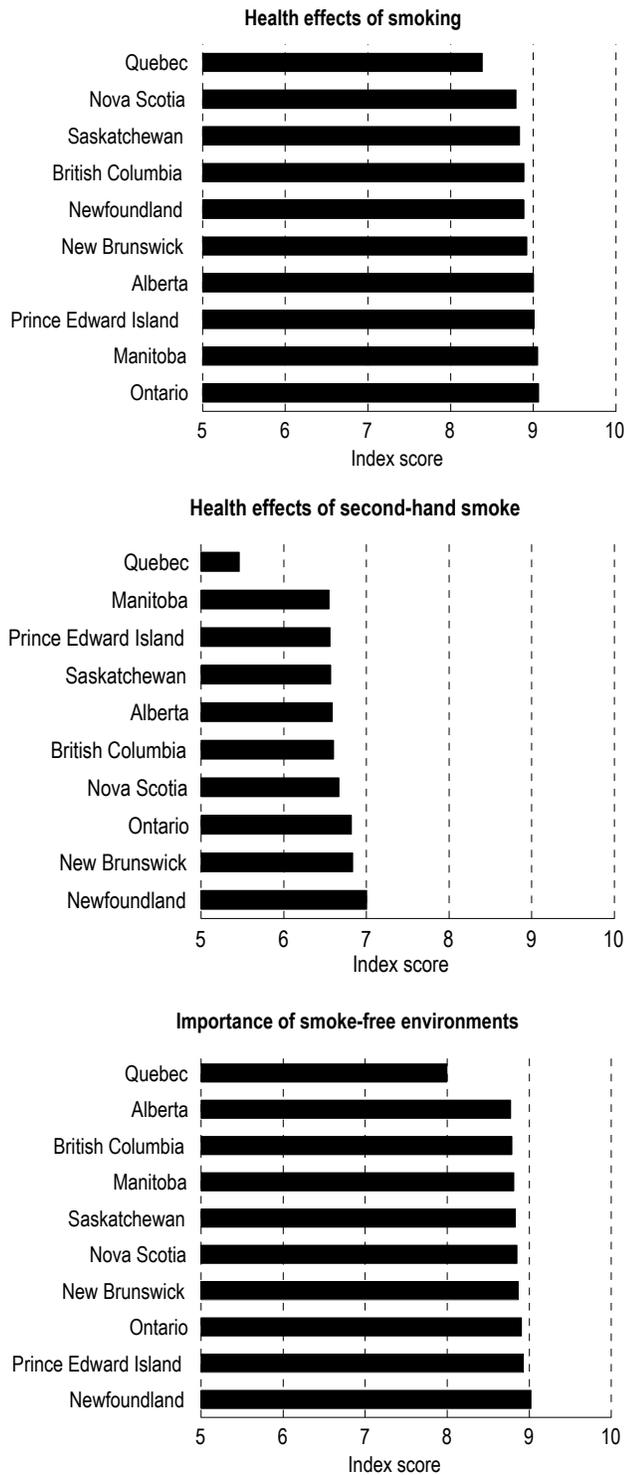
The internal consistency of the attitude questions within each grouping was tested with Cronbach’s alpha.¹⁹ Reliable health measures typically have Cronbach’s alpha scores above 0.75.²⁰ The consistency scores for the items measuring attitudes toward the *health effects of smoking* and of *second-hand smoke* were 0.90 and 0.92, respectively, while the score for the *importance of smoke-free environments* grouping was 0.60. The internal consistency for the last grouping seems modest, but population studies with large sample sizes can withstand lower reliability measure values.²¹ In all three cases, the items within each grouping were asked sequentially, and in the case of the first two, the wording of the four items is similar. This, along with the imputation mentioned above, may influence response patterns so as to inflate internal consistency.

To determine *smoking status*, respondents were asked, “At the present time, do you smoke cigarettes daily, occasionally or not at all?” In all analyses except Chart 1, daily and occasional smokers were grouped into a “smoker” category.

Intention to quit was determined with the question, “Are you seriously considering quitting within the next 6 months?”

The question “Does anyone in this household smoke regularly inside the house?” was used to determine the *presence of smokers at home*.

Chart 3
Adjusted† average scores for attitudes toward smoking,‡ by province, Canada excluding territories, 1996/97



Data source: 1996/97 National Population Health Survey, Health file
 † Adjusted for smoking status, sex, age, educational attainment and the interactions of smoking status * sex, smoking status * age, and smoking status * educational attainment
 ‡ Higher scores indicate stronger anti-smoking attitudes.

between smokers and non-smokers about the health effects of second-hand smoke actually increased.²² However, a more recent Ontario study showed that the gap between smokers' and non-smokers' attitudes toward smoke-free homes is narrowing. Even so, most homes with children in which there are also daily smokers are not smoke-free.²³

Attitudes about the importance of smoke-free environments may incorporate issues of politeness as well as beliefs about health effects. Thus, scores for smokers and non-smokers alike generally indicate that people agree about the need for smoke-free places more readily than they acknowledge the negative health consequences of second-hand smoke.

Smokers' attitudes also varied by whether they were seriously considering quitting. Those who intended to quit scored significantly higher on all three measures than smokers who did not intend to quit (Chart 2). These results suggest that awareness of the health risks may be an important catalyst in the process of quitting. It may also be that those who are ready to quit are more likely to accept and admit the health risks.²⁴

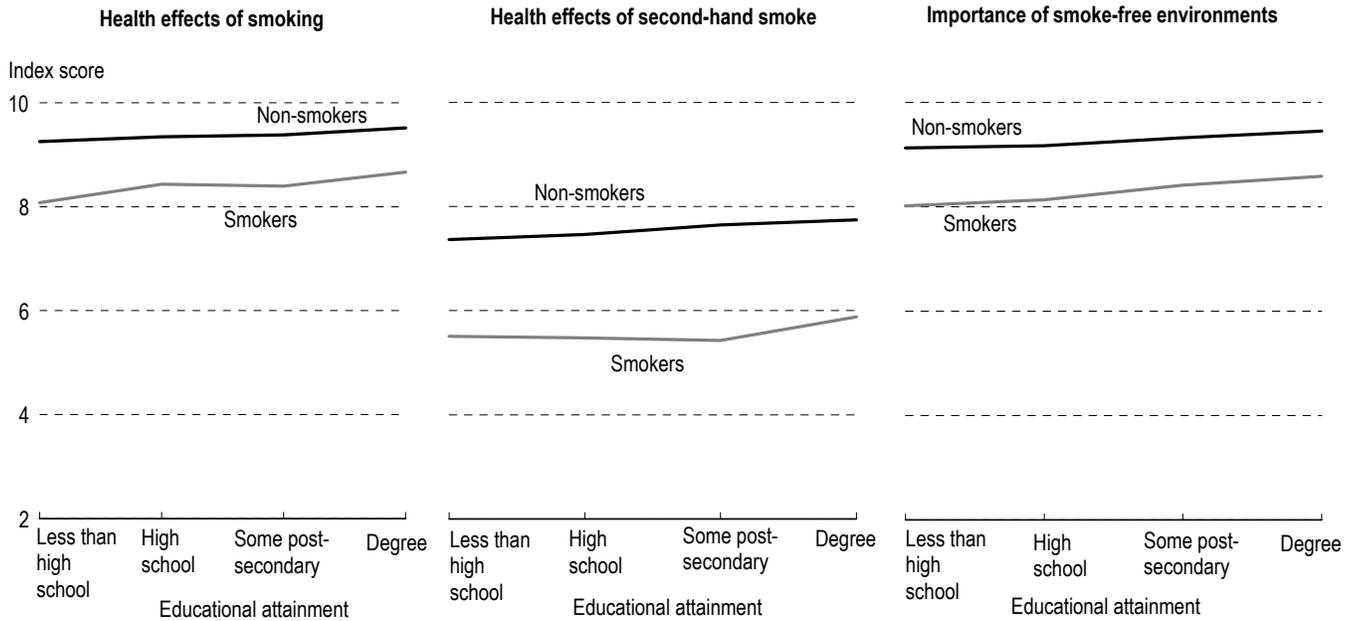
When other variables were taken into account, smoking status remained a significant explanatory variable in the models of beliefs about the health effects of second-hand smoke and about the importance of smoke-free environments (Appendix Table A). It was not significant, however, in the model of beliefs about the health effects of smoking. This is likely a reflection of the grouping together of daily and occasional smokers into one category (smoker). As noted earlier, occasional and non-smokers' scores on the health effects of smoking index were not significantly different (Chart 1).

Quebeckers more tolerant

Quebec has had the highest smoking rate in Canada since the 1960s.² Therefore, it is not surprising that Quebeckers' attitudes toward smoking were significantly less negative than those of other Canadians, even when confounding variables like smoking status, education, age and sex were taken into account (Chart 3, Appendix Table A). These results might also reflect provincial differences in

Chart 4

Adjusted[†] average scores for attitudes toward smoking,[‡] by educational attainment and smoking status, Canada excluding territories, 1996/97



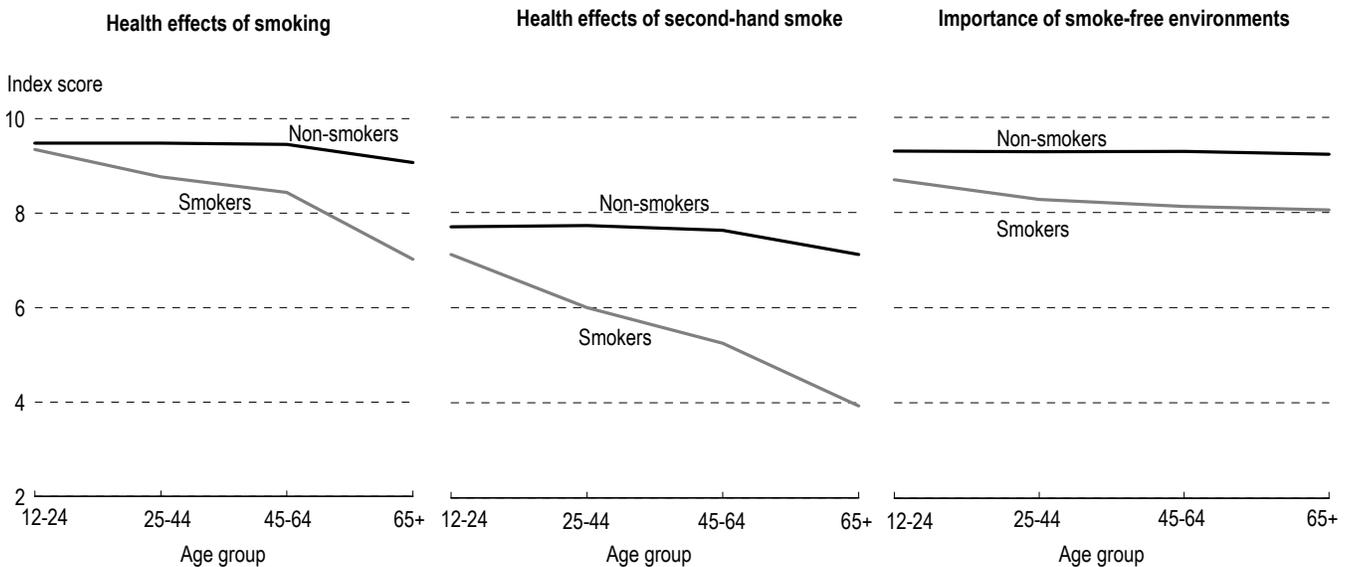
Data source: 1996/97 National Population Health Survey, Health file

[†] Adjusted for sex, age, province, and the interactions of smoking status * sex and smoking status * age

[‡] Higher scores indicate stronger anti-smoking attitudes.

Chart 5

Adjusted[†] average scores for attitudes toward smoking,[‡] by age groups and smoking status, Canada excluding territories, 1996/97



Data source: 1996/97 National Population Health Survey, Health file

[†] Adjusted for sex, educational attainment, province, and the interactions of smoking status * sex and smoking status * educational attainment

[‡] Higher scores indicate stronger anti-smoking attitudes.

smoking prevention programs, local and provincial legislation, and messages conveyed by the media.

Alberta was the only province showing significantly more supportive attitudes toward smoke-free environments compared with Ontario, the reference province.

Scores rise with educational attainment

Educational attainment appears to be the best single socio-demographic predictor of smoking or smoking cessation.¹ Therefore, it is hardly surprising that attitude scores are associated with level of education (Chart 4). Respondents with high school or less had significantly lower scores on all three attitude measures.

There appeared to be little interaction between smoking status and educational attainment, with the wide gap in scores between smokers and non-smokers staying fairly constant across most attainment groups. The exception was smokers with less than high school, whose attitude scores on the health effects of smoking and on the importance of smoke-free environments were significantly lower.

Limitations

The assumption of this analysis is that attitudes and behaviour are related. However, the cross-sectional nature of this study does not allow for specific testing of which one precedes the other.

All data were self-reported, and the degree of their validity is unknown. Certain smokers may have reported a non-smoking status or may have exaggerated anti-smoking attitudes because of the social desirability of these responses.

Another limitation concerns the interpretation of questions. For example, some respondents might believe that smoking causes lung cancer only among people who smoke heavily for a long period of time. Similarly, some respondents could have interpreted exposure to second-hand smoke to mean brief, casual exposure, and therefore, not considered it to have health consequences; others might have assumed the question implied daily exposure at home or at work and answered differently.

Youths smoke despite anti-smoking attitudes

An age cohort effect can be seen in beliefs about the health effects of smoking and second-hand smoke (Chart 5). People aged 65 or older had significantly lower attitude scores on the health effects of smoking and of second-hand smoke, relative to people aged 12 to 24.

Furthermore, among smokers, those in the three oldest age groups had significantly lower attitude scores for all three measures. The oldest smokers held relatively moderate beliefs about the health effects of smoking and had dramatically more lenient attitudes about the effects of second-hand smoke.

For people aged 12 to 24, attitudes and behaviour were more inconsistent. Both smoking and non-smoking youths believed strongly in the health hazards. However, this obviously did not dissuade the smokers in this age group from tobacco use. Factors such as peer pressure or home environment may have much more influence over young people than do beliefs about health risks that may affect them too far in the future to seem relevant. Indeed, analyses of Statistics Canada's 1994 Youth Smoking Survey showed that most young people held strong anti-smoking attitudes—that second-hand smoke is harmful, that tobacco is addictive, and that smokers are unable to quit anytime they want to—yet many young people with these attitudes smoked.²⁵ Efforts to prevent smoking initiation by youths might take this inconsistency between their attitudes and behaviour into account and emphasize other negative consequences of smoking such as unpleasant breath and reduced disposable income.

Men and women hold similar attitudes

Research suggests that women smoke for different reasons than men,^{14,26} which may be expected to result in different attitudes. However, the questions used in the NPHS may not have captured such differences. For instance, although women had slightly lower attitude scores, after smoking status, age, education and province were taken into account, the difference was not statistically significant. This

is surprising, given the relatively slow decline of smoking prevalence among women, compared with men.^{1,2,27,28} Women placed a higher emphasis on the importance of smoke-free environments, but this, too, was not significant.

Implications

Attitudes toward smoking vary with socio-demographic characteristics. And as might be expected, smokers are more tolerant than non-smokers. Such attitudes may reflect a lack of knowledge, or with the decline in smoking, smokers may now comprise a more homogenous and committed group, resistant to many smoking prevention efforts. For a smoker, accepting the facts about health risks would result in an uncomfortable psychological state in which attitudes and behaviour are not consistent. Out of psychological necessity, smokers may need to downplay the negative health effects.

Young people who smoke do so while acknowledging the negative consequences of smoking. Young smokers were supportive of smoke-free environments, perhaps because they have encountered public restrictions on smoking throughout their lives. The smoking rate in this age group, however, has been increasing in the 1990s. Thus, it may also be that young people express negative attitudes toward smoking simply because it is more socially desirable.

Older smokers held the most moderate beliefs about health effects, especially of second-hand smoke. This has important public health implications. If older smokers had full knowledge of and belief in the health risks of second-hand smoke, they might be less inclined to expose others.

Concluding remarks

The majority of Canadians seem to be convinced of the negative effects of smoking, perhaps in part due to anti-smoking messages. The decline in smoking over the past 30 years from more than one-half to less than one-third of the population is perhaps the best evidence of the success of public health efforts in combatting smoking-related disease and death. However, campaigns conveying the

message about the effects of second-hand smoke have not resonated with as many people, especially older smokers. Furthermore, public attitudes toward smoking have remained fairly tolerant in Quebec. For youths, awareness of health risks and support for smoke-free environments do not seem to deter those who smoke. Clearly, the health risk is only one of many factors that influence an individual's smoking behaviour. ●

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Appendix

Table A

Regression results for scores on attitudes toward smoking,[†] Canada excluding territories, 1996/97

	Health effects of smoking			Health effects of second-hand smoke			Importance of smoke-free environments		
	Unstand-ardized coefficient (b)	95% confidence interval	Stand-ardized coefficient (beta)	Unstand-ardized coefficient (b)	95% confidence interval	Stand-ardized coefficient (beta)	Unstand-ardized coefficient (b)	95% confidence interval	Stand-ardized coefficient (beta)
Smoker	0.19	-0.13, 0.51	0.04	-0.63*	-1.09, -0.17	-0.08	-0.26*	-0.51, 0.00 [§]	-0.06
Female	-0.05	-0.13, 0.03	-0.01	-0.03	-0.17, 0.12	0.00	0.03	-0.04, 0.10	0.01
Age									
12-24 [‡]									
25-44	0.00	-0.11, 0.11	0.00	0.02	-0.20, 0.24	0.00	-0.01	-0.12, 0.09	0.00
45-64	-0.02	-0.14, 0.09	0.00	-0.08	-0.31, 0.15	-0.01	-0.01	-0.13, 0.11	0.00
65+	-0.41*	-0.55, -0.28	-0.06	-0.52*	-0.78, -0.27	-0.05	-0.07	-0.18, 0.05	-0.01
Education									
Less than high school	-0.26*	-0.37, -0.15	-0.05	-0.38*	-0.62, -0.14	-0.05	-0.32*	-0.41, -0.22	-0.08
High school	-0.17*	-0.28, -0.05	-0.03	-0.28*	-0.50, -0.07	-0.03	-0.28*	-0.39, -0.16	-0.05
Some postsecondary Degree [‡]	-0.13*	-0.22, -0.03	-0.02	-0.10	-0.28, 0.08	-0.01	-0.12*	-0.21, -0.03	-0.03
Province									
Newfoundland	-0.02	-0.17, 0.13	0.00	0.18	-0.12, 0.48	0.01	0.02	-0.12, 0.17	0.00
Prince Edward Island	0.01	-0.10, 0.12	0.00	-0.48*	-0.80, -0.15	-0.01	-0.01	-0.18, 0.15	0.00
Nova Scotia	-0.11	-0.29, 0.06	-0.01	-0.37*	-0.70, -0.05	-0.02	0.07	-0.07, 0.20	0.01
New Brunswick	-0.13	-0.30, 0.05	-0.01	-0.15	-0.52, 0.21	-0.01	-0.03	-0.18, 0.12	0.00
Quebec	-0.47*	-0.62, -0.32	-0.09	-1.51*	-1.76, -1.27	-0.18	-0.58*	-0.70, -0.46	-0.13
Ontario [‡]									
Manitoba	0.03	-0.04, 0.10	0.00	-0.22*	-0.38, -0.05	-0.01	0.01	-0.06, 0.08	0.00
Saskatchewan	-0.30*	-0.47, -0.13	-0.02	-0.47*	-0.80, -0.15	-0.02	-0.11	-0.29, 0.07	-0.01
Alberta	-0.07	-0.18, 0.04	-0.01	-0.25*	-0.51, 0.00 [§]	-0.02	0.12*	0.02, 0.22	0.02
British Columbia	-0.01	-0.10, 0.09	0.00	-0.12	-0.35, 0.12	-0.01	0.04	-0.05, 0.14	0.01
Interaction terms									
Smoker, female	-0.10	-0.33, 0.12	-0.02	-0.05	-0.38, 0.28	0.00	-0.14	-0.31, 0.04	-0.02
Smoker, aged 25-44	-0.58*	-0.86, -0.30	-0.09	-1.13*	-1.56, -0.70	-0.10	-0.40*	-0.65, -0.14	-0.07
Smoker, aged 45-64	-0.89*	-1.18, -0.61	-0.10	-1.79*	-2.24, -1.34	-0.12	-0.55*	-0.84, -0.27	-0.07
Smoker, aged 65+	-1.93*	-2.42, -1.44	-0.12	-2.66*	-3.30, -2.03	-0.10	-0.58*	-0.94, -0.23	-0.04
Smoker with less than high school	-0.32*	-0.61, -0.02	-0.04	0.01	-0.44, 0.47	0.00	-0.25*	-0.48, -0.02	-0.04
Smoker with high school	-0.05	-0.35, 0.25	-0.01	-0.11	-0.55, 0.32	-0.01	-0.17	-0.41, 0.07	-0.02
Smoker with some post-secondary	-0.13	-0.42, 0.15	-0.02	-0.35	-0.76, 0.07	-0.02	-0.05	-0.28, 0.18	-0.01
Smoker in Newfoundland	-0.30	-0.67, 0.06	-0.01	0.02	-0.67, 0.70	0.00	0.18	-0.08, 0.45	0.01
Smoker in Prince Edward Island	-0.12	-0.46, 0.22	0.00	0.44	-0.20, 1.07	0.00	0.08	-0.24, 0.41	0.00
Smoker in Nova Scotia	-0.31	-0.80, 0.18	-0.01	0.45	-0.28, 1.18	0.01	-0.24	-0.63, 0.15	-0.01
Smoker in New Brunswick	-0.02	-0.42, 0.37	0.00	0.34	-0.31, 1.00	0.01	-0.01	-0.28, 0.25	0.00
Smoker in Quebec	-0.42*	-0.72, -0.12	-0.05	0.32	-0.11, 0.74	0.02	-0.65*	-0.89, -0.41	-0.09
Smoker in Manitoba	-0.08	-0.29, 0.14	0.00	-0.11	-0.49, 0.27	0.00	-0.22*	-0.40, -0.03	-0.01
Smoker in Saskatchewan	0.16	-0.20, 0.52	0.01	0.44	-0.19, 1.08	0.01	0.08	-0.29, 0.44	0.00
Smoker in Alberta	0.03	-0.30, 0.36	0.00	0.05	-0.51, 0.60	0.00	-0.50*	-0.81, -0.18	-0.04
Smoker in British Columbia	-0.33	-0.70, 0.04	-0.03	-0.19	-0.86, 0.47	-0.01	0.31*	-0.61, -0.02	0.03
Intercept	9.75	9.63, 9.88	0.00	8.24	8.00, 8.49	0.00	9.50	9.39, 9.61	0.00

Data source: 1996/97 National Population Health Survey, Health file

† High scores indicate stronger anti-smoking attitudes.

‡ Reference category

§ Confidence interval limits include zero because of rounding.

* Significant at alpha = 0.05

Table B
Unadjusted average scores for attitudes toward smoking,[†]
Canada excluding territories, 1996/97

	Health effects of smoking	Effects of second-hand smoke	Importance of smoke-free environments
Age by smoking status			
12-24, non-smoker	9.4	7.6	9.2
25-44, non-smoker	9.5	7.7	9.3
45-64, non-smoker	9.4	7.5	9.2
65+, non-smoker	9.0	7.0	9.1
12-24, smoker	9.1	6.8	8.4
25-44, smoker	8.7	5.8	8.1
45-64, smoker	8.3	5.0	7.9
65+, smoker	6.8	3.6	7.7
Education by smoking status			
Less than high school, non-smoker	9.2	7.2	9.0
High school, non-smoker	9.4	7.5	9.1
Some postsecondary, non-smoker	9.4	7.6	9.3
Degree, non-smoker	9.6	7.8	9.4
Less than high school, smoker	8.2	5.6	7.8
High school, smoker	8.7	5.6	8.0
Some postsecondary, smoker	8.7	5.6	8.2
Degree, smoker	8.8	5.9	8.3
Provinces			
Newfoundland	9.2	7.6	9.1
Prince Edward Island	9.3	7.0	9.1
Nova Scotia	9.1	7.1	9.1
New Brunswick	9.2	7.3	9.0
Quebec	8.7	5.9	8.3
Ontario	9.4	7.5	9.1
Manitoba	9.4	7.2	9.1
Saskatchewan	9.1	7.0	9.0
Alberta	9.3	7.2	9.1
British Columbia	9.3	7.3	9.1
Sex by smoking status			
Male, non-smoker	9.4	7.6	9.2
Female, non-smoker	9.4	7.5	9.2
Male, smoker	8.6	5.7	8.1
Female, smoker	8.5	5.6	8.0

Data source: 1996/97 National Population Health Survey, Health file

[†] High scores indicate stronger anti-smoking attitudes. Possible range is between 0 and 10.