

Smoking in Canadian Homes

Are All Smokers the Same?

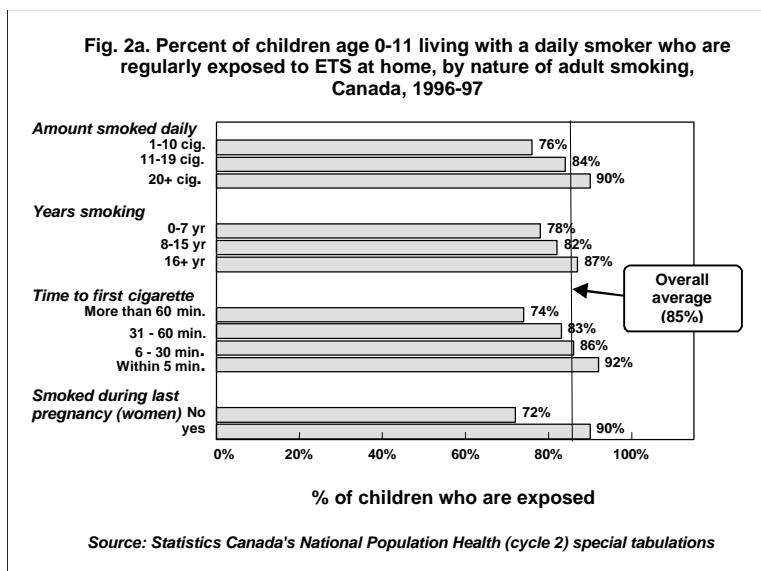
Overview

There are more than four and a half million children in Canada under the age of 12 and more than a quarter of these children — a minimum of 1.2 million — live with someone who smokes daily. The vast majority of these children (85%) are exposed regularly to environmental tobacco smoke (ETS) at home. In other words, if there is a daily smoker in the household, the chances are very high that the health of any young children in the same household will be at risk because of second-hand smoke.

What are the characteristics of the smokers who are exposing these children? Their likelihood of exposing children to ETS depends upon the nature of the smoking habit and, to a lesser extent, certain personal qualities.

Nature of Adult Smoking

The chances of children being exposed when they live with an adult smoker increase with the smoker's level of dependence on nicotine. Being dependent means smoking a large number of cigarettes per day, lighting up shortly after waking, being a smoker for many years, and, for women, smoking during pregnancy. As each of these signs of dependence increases, so do the chances that a child in the same household will be exposed regularly to ETS (Fig. 2a). Compared to the average of 85% of children being exposed if they live with a daily smoker, 90% are exposed if they live with a heavy smoker (20+ cigarettes daily), 92% are exposed if the smoker lights up each morning within five minutes of waking up, and 90% are exposed if an adult woman in the household smoked during her most recent pregnancy.

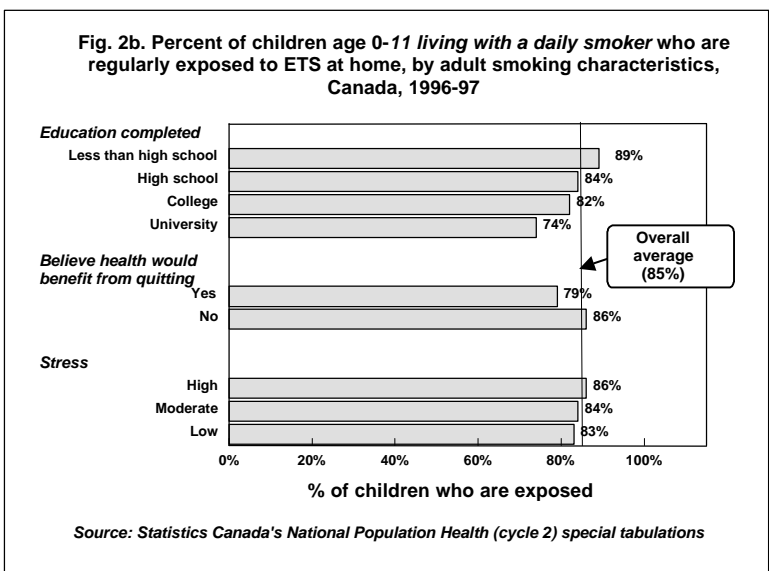


The presence of a smoker in the household is the best predictor of whether or not the children will be exposed to ETS — more important than the family's economic circumstances or where they live.

However, even in households with smokers who smoke modest amounts daily, who are relatively new smokers, or who wait at least an hour before their first smoke of the day, about three children in every four is exposed to ETS at home on a regular basis.

These results are not surprising. They indicate that, by various measures, it is the most dependent smokers who are most likely to smoke at home (or, more properly, to live with children who are exposed, since the study could not identify which household member was responsible for the children's exposure). Two of these measures — amount smoked daily and time to first cigarette — are sometimes combined into a measure of nicotine dependence called the Heaviness of Smoking Index. Nicotine dependence, in turn, is correlated with years of smoking history. However, none of these characteristics predicts ETS exposure for children like the mere fact of having a daily smoker in the same household: 85% of Canadian children who live with a daily smoker are regularly exposed to ETS, compared to 33% of children overall (see Highlight Sheet #1 for further detail).

Characteristics of Adult Smokers



Children who live with an adult smoker are at a slight advantage if the smoker is university educated or believes there would be some health benefit to quitting. Indeed, the chances of children's exposure decrease as the smoker's formal education increases (Fig. 2b). However, as noted before, if there is a daily smoker in the household, this is the major determining factor for children's exposure, and three quarters of these children are still exposed to ETS even if the smoker is a university graduate.

Why do adults smoke around children at home? The study did not ask this question directly, but it is apparently not because the adults wish to alleviate their stress or because they are depressed (Fig. 2b). Smokers' knowledge of the health effects of ETS may play a small role; this is examined in Highlight Sheet #3.

What Does This Mean for Children?

Because ETS exposure of children is associated with smokers' dependence on their habit, there may be a kind of double jeopardy for some children: not only are they more likely to be exposed when the smoker's daily consumption is high and smoking starts early each day, but the dose of the exposure may also be higher. Further, smokers are likely to be married to smokers. Although the study could not determine the ETS dose or the total number of smokers in the home, it follows from the findings presented above that not all children in the homes of daily smokers are equally exposed.

Where are the most dependent smokers? The separate indicators vary somewhat from province to province, but, overall, Quebec and Newfoundland have the most dependent smokers, while BC and Manitoba have the least (Table 2). These results suggest where physicians and other concerned professionals will find the greatest resistance — or acceptance — of their efforts to encourage cessation. And it is clear from these results that adult cessation of smoking is likely to be an effective measure in protecting children from ETS at the same time that it leads to the improved health of the smoker.

Table 2. Signs of Nicotine Dependence, by Province

| | 20+ cig./day (%) | First cig. within 5 min. (%) | Smoked 16+ yr. (%) | Not considering quitting (%) | Overall rank* |
|--------|---------------------|------------------------------------|--------------------------|---------------------------------------|------------------|
| Canada | 44 | 24 | 42 | 47 | — |
| QC | 57 | 33 | 44 | 63 | 1 |
| NF | 39 | 32 | 48 | 59 | 2 |
| SK | 39 | 20 | 43 | 49 | 3 |
| AB | 38 | 25 | 41 | 46 | 4 |
| NS | 45 | 20 | 38 | 55 | 5 |
| PE | 49 | 19 | 41 | 46 | 6 |
| ON | 42 | 20 | 42 | 40 | 6 |
| NB | 37 | 24 | 40 | 48 | 8 |
| MB | 38 | 20 | 39 | 43 | 9 |
| BC | 31 | 23 | 39 | 32 | 10 |

* calculated as the sum of the ranks of the four indicators

References

Fagerström KO. Measuring degree of physical dependence to tobacco smoking with reference to individualization of treatment. *Addictive Behaviors* 1978; 3-4: 235-241.

Statistics Canada. National Population Health Survey 1996-97, Share File.

Acknowledgments

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Background of the study

These results are from a special analysis of over 31,000 children age 0-11 living in 20,358 households across Canada in 1996-97. They were part of the National Population Health Survey, a comprehensive study conducted by Statistics Canada every two years and designed to describe the health status and circumstances of the Canadian population. These results are representative of children in all parts of the country except remote areas and the territories.

Information was collected by trained interviewers using a portable computer for in-home questioning. Data reported here were obtained from a selected member of the household age 12 or older.

The survey did not conduct a census of the smoking habits of all household smokers. Thus it is possible to identify children who definitely live with a smoker *only if the household member selected for an interview was a smoker*. If that person was not a smoker, however, it is not possible to say if another adult was or if the child definitely lived with no smokers. Thus the statement that “at least” 1.026 million children live with a smoker. Considering that nearly 1.6 million children are regularly exposed to ETS at home, close to this number probably live with a smoker.

This is the first time that the ETS exposure of such a large and diverse sample of children has been studied in such depth.