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Workplace Restrictions on Smoking: Are They Good for the Smoker, Too?*

The issue

Adult smoking behaviour is known to be associated with restrictions on smoking, and this is true in both public places and workplaces.¹ In the general adult population, the more extensive the restrictions on public smoking, the fewer the smokers, and the less the amount consumed by those who still smoke. Moreover, these associations are true regardless of sex, marital status, and education levels.² This study asks if the extent of workplace restrictions affects smoking among a *general* population of workers.

Methods

The data analyzed in this study are from the 2001 Canadian Community Health Survey, the very large national household survey conducted biennially by Statistics Canada. This analysis was limited to working persons age 20-64. The sample size was 66,112, which has a margin of error of $\pm 0.5\%$ 95 times out of 100. The sample included 17,700 daily smokers and accurately reflects the Canadian population of working people living in households.

Results

Among employed Canadian adults in 2001, both the proportion of whom were smokers and the amount smoked daily varied widely according to the level of restrictions at work (Table 1).

Table 1. Prevalence of smoking and amount smoked daily, according to workplace smoking restrictions, employed persons age 20-64, Canada, 2001

	Daily smokers (%)	Cigarettes per day (#)
All working persons (n=66,112)	24.4	17.0
Smoking completely banned (n=38,054)	17.6	15.4
Smoking confined to certain areas (n=18,522)	33.3	17.5
Smoking unrestricted (n=9,536)	40.4	20.1

* A condensed version of a presentation by Thomas Stephens to the International Congress of Behavioral Medicine, Mainz, Germany, 27 August 2004

- 24.4% of employed adult Canadians were daily smokers, and these smokers consumed an average of 17.0 cigarettes daily.
- Workers in unrestricted settings were *2.3 times more likely* to be daily smokers than those who worked where smoking was totally banned. The chances of a worker being a daily smoker is, on average, 23 percentage points higher in a workplace without restrictions than one where there is a complete ban on smoking.
- Among those workers who were daily smokers, the amount smoked daily was 4.7 cigarettes (30.5%) more if there were no restrictions on smoking at work compared to complete restrictions.

Even more importantly, these strong associations of smoking behavior and workplace restrictions were *independent of age, sex, occupation, education, and income*. They held across levels of *work stress, depression and whether or not there were attempts to quit smoking in the previous 12 months*.

Discussion

The principal rationale for smoke-free policies is to protect non-smokers from the well-documented harmful effects of passive smoking.³ At the same time, it is clear that restricting smoking in public places and workplaces leads to a decline in the number of smokers and, for those who do not quit, a decline in the amount smoked daily.¹ This association has been demonstrated with ecological and longitudinal studies of individuals, among young and older smokers, and for both sexes.

The present study replicates these results among the working population in Canada, and extends them by looking at three levels of smoking restriction rather than the usual two. While the survey data used here are cross-sectional and cannot be used to conclusively establish cause and effect, it is clear from these analyses that there is a strong association between smoking behaviour and workplace restrictions.

The implication of this study is that strengthening smoke-free legislation in the workplace will result not only in better protection for non-smokers, but will also serve as an inducement to workers who smoke to quit or reduce their consumption.

¹ US Department of Health and Human Services. *Reducing Tobacco Use: A Report of the Surgeon General*. Atlanta: Office on Smoking and Health, Centers for Disease Control, 2000.

² Stephens T, Pederson LL, Koval JJ, Macnab J. Comprehensive Tobacco Control Policies and the Smoking Behaviour of Canadian Adults. *Tobacco Control* 2001; 10: 317-322.

³ Ontario Medical Association. *The Duty to Protect: Eliminating Second-hand Smoke from Public Places and Workplaces in Ontario*. Toronto: Ontario Medical Association, Feb 2003.