Smoking Frequency, Prevalence and Trends, and Their Socio-demographic Associations in Alberta, Canada

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ABSTRACT

Objectives: To determine the numbers of smokers, smoking prevalence and trends, and to examine their socio-demographic associations in Alberta using data from three Canadian national health surveys undertaken between 2000 and 2005.

Methods: The three surveys collected self-reported health data from Canadians aged 12 years and older. The weighted number of smokers and the smoking prevalence by health region and by urban/rural status were determined. The socio-demographic associations of smoking in Alberta were examined using logistic regression analysis.

Results: The numbers of smokers and the smoking prevalence were both higher among men than women, in middle-aged groups (20-39 and 40-59 years) than in younger (12-19 years) and older (≥60 years) groups, and among Canadian-born people than immigrants to Canada. The smoking prevalence tended to 1) increase with the increasing rurality of residence, 2) decrease over the timeframe examined, 3) be inversely proportional to educational level and 4) be inversely proportional to household income. The number of smokers was largest in urban areas and among those who reported the highest education and household income.

Discussion: The new tobacco legislation being introduced in Alberta in 2009 may decrease the smoking prevalence in the province, but additional interventions in the regions with the largest numbers of smokers may help further reduce the smoking population and overall smoking prevalence in Alberta.

Key words: Smoking; prevalence; trend; socio-demographic factors; public health

La traduction du résumé se trouve à la fin de l'article.

Tobacco smoking is one of the most important yet preventable causes of diseases and deaths in the world.[1-5] Despite substantial declines over the past few decades in Canada,[6] one-fifth of Canadians still smoked in 2006.[7] In 2007, the Canadian Federal Tobacco Control Strategy set a new target to further reduce the smoking rate to 12% by 2011.[8] Although the strategy has been articulated at a federal level, the provincial/territorial health authorities have an important role to play in achieving this national goal.

In Alberta, regional health authorities (RHAs) have been responsible for making and implementing local public health policies, including those relevant to cigarette smoking. While there are data describing the smoking trends in Alberta,[9] there is a paucity of published information concerning the numbers of smokers, and smoking prevalence and trends at the RHA level. Furthermore, the socio-demographic factors that may be associated with smoking in Alberta have not been examined.

The aims of this study were to determine the smoking frequency, prevalence and trends at the RHA level, and to examine their socio-demographic associations in Alberta. Such information will help guide policy-makers in facilitating resource planning and in evaluating the effectiveness of smoking control programs.

METHODS

Three Canadian Community Health Surveys (CCHS: Cycle 1.1, 2000/01; Cycle 2.1, 2002/03; Cycle 3.1, 2004/05) were carried out by Statistics Canada between 2000 and 2005. The surveys collected self-reported health information from a representative sample of Canadians aged 12 years and older, with the exclusion of the population on Indian reserves and Canadian forces bases, in institutions and in some remote areas. The three surveys were designed to provide reliable health estimates at the RHA level across Canada. The sample sizes were, respectively, 130,880, 134,072 and 132,221 for Canada, and 14,456, 13,871 and 11,800 for Alberta. The response rates ranged from 78.9% to 84.7% for Canada and from 81.5 % to 85.1% for Alberta. The survey methodology has been published widely[6,10,11] and can also be found on the Statistics Canada website.[12]

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Table 1. Numbers of Smokers and Smoking Prevalence by Survey, Sex and Regional Health Authority, sorted by PUP*

|	2000/01			2002/03			2004/05			
Men	**n†**	**n‡**	**Prev (95% CI)§**	**n†**	**n‡**	**Prev (95% CI)§**	**n†**	**n‡**	**Prev (95% CI)§**	**PUP***
Calgary	391	123,353	27.7 (24.7-30.7)	304	107,013	22.6 (19.5-25.7)	312	110,582	22.2 (19.4-25.0)	93%
Capital	385	117,377	30.0 (26.4-33.5)	329	98,374	24.1 (20.8-27.3)	317	118,935	28.1 (24.4-31.8)	91%
Palliser	115	11,376	29.3 (23.9-34.8)	96	12,416	29.8 (22.2-37.3)	130	14,353	33.8 (28.3-39.2)	76%
Northern Lights	161	7627	34.0 (28.0-40.1)	130	8979	32.9 (27.0-38.7)	111	9513	32.6 (26.5-38.6)	73%
Chinook	112	17,275	28.9 (22.8-35.0)	92	15,261	24.9 (19.5-30.4)	103	11,389	18.5 (13.7-23.3)	72%
David Thompson	287	35,252	30.8 (26.7-35.0)	249	34,144	28.1 (24.2-32.0)	171	30,853	25.7 (21.7-29.6)	60%
Peace County	250	16,915	32.5 (28.5-36.5)	163	15,570	29.3 (23.6-34.9)	132	16,911	31.3 (25.5-37.0)	58%
East Central	136	16,920	36.1 (29.9-42.4)	84	10,438	22.9 (17.0-28.9)	109	13,136	27.6 (22.1-33.0)	50%
Aspen	295	23,824	34.1 (29.5-38.7)	223	20,475	30.0 (25.3-34.8)	127	18,858	27.2 (22.0-32.3)	46%
Alberta	2132	369,919	29.8 (28.1-31.5)	1670	322,670	24.8 (23.1-26.5)	1512	344,530	25.6 (23.9-27.3)	82%
Women										
Calgary	359	101,778	23.0 (20.5-25.5)	298	84,198	18.1 (15.6-20.6)	262	86,876	17.6 (15.0-20.2)	93%
Capital	367	102,955	26.2 (22.7-29.6)	326	91,239	22.3 (18.8-25.8)	281	81,124	18.9 (16.1-21.7)	91%
Palliser	109	10,731	26.9 (21.2-32.6)	100	10,724	26.5 (21.1-31.9)	98	10,220	24.3 (18.4-30.1)	76%
Northern Lights	138	5913	29.3 (24.1-34.5)	106	6736	27.8 (22.6-33.1)	85	7132	28.1 (22.0-34.2)	73%
Chinook	104	13,090	21.9 (17.6-26.2)	77	9527	15.5 (11.1-20.0)	132	13,220	21.6 (17.2-26.1)	72%
David Thompson	282	30,743	27.6 (24.5-30.6)	267	32,248	26.9 (23.2-30.5)	166	29,731	25.3 (20.8-29.8)	60%
Peace County	234	14,701	30.7 (26.5-34.9)	152	10,295	20.7 (16.4-25.1)	136	12,471	24.8 (18.5-31.1)	58%
East Central	132	15,190	32.5 (27.0-38.0)	91	10,315	22.6 (16.7-28.6)	98	10,195	22.0 (17.5-26.5)	50%
Aspen	264	18,899	28.3 (24.6-32.1)	219	17,121	26.1 (21.9-30.2)	120	15,497	23.5 (18.9-28.2)	46%
Alberta	1989	313,999	25.5 (24.0-27.0)	1636	272,403	21.2 (19.7-22.8)	1378	266,466	20.0 (18.6-21.4)	82%

* Percent urban population
† Unweighted number of respondents who were current daily or occasional smokers
‡ Weighted number of respondents who were current daily or occasional smokers
§ Weighted prevalence in percent (95% confidence interval)

During CCHS 1.1, there were 17 RHAs in Alberta. The 17 RHAs were collapsed into nine RHAs by Alberta Health and Wellness in 2003. To facilitate comparisons over time, the 17 RHAs were regrouped into the nine corresponding RHAs using a 2006 Postal Code Translation File (prepared by Alberta Finance). This contains information on both postal codes and RHA designations, and can be merged with the postal codes in the CCHS 1.1 dataset to re-define the RHAs. To characterize the urban/rural status of the nine RHAs, the 2006 Census urban/rural population for Alberta census subdivisions[13] was matched to the census subdivisions of the nine RHAs in the Postal Code Translation File. An urban area was defined by the Census as a minimum population of 1,000 and a population density of at least 400 persons/km^2. On the basis of this definition, the percent urban population (PUP) for the nine RHAs ranged from 46% to 93%, with an average of 82%. A map outlining the 2008 RHA boundaries is presented in Figure 1.

In the CCHS surveys, a variable known as "type of smoker" was derived. For the purposes of this analysis, respondents defined as "current daily smokers" or "occasional smokers" were combined into a single group (smokers), and all other respondents were combined into a "non-smoker" group. The missing values (i.e., "don't know" or "refusal"), accounting for less than 6% of the responses in each survey, were excluded from the analysis. The respondents' sex, age, educational level, household income and immigration status were also extracted to examine their association with smoking.

The estimated numbers of smokers and smoking prevalence were first determined by survey, sex and RHAs, and then by the socio-demographic and urban/rural status of the population using the final and Bootstrap weights. The final weight was used to adjust the sample into the appropriate population distribution. The Bootstrap weight was used in variance estimation to account for the complex sample design of the surveys. The association between smoking and socio-demographic factors was further examined using logistic regression. The likelihood ratio test was used to retain the significant predictors of smoking by means of backward elimination. For all significance tests performed, a p-value of <0.05 was

Figure 1. Alberta regional health authorities and population (2008)
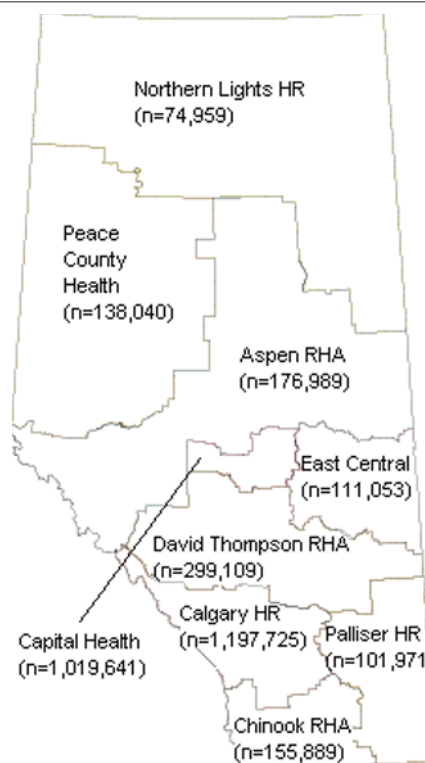
considered statistically significant. The analyses were performed using SAS 9.1 (SAS Institute Inc., Cary, NC, US) and STATA 9.2 (Stata Corporation, College Station, TX, US).

RESULTS

Table 1 presents the smoking prevalence and numbers of smokers by survey and sex for the nine RHAs and for the entire province of Alberta. The smoking prevalence in the nine RHAs ranged from 18.5% to 36.1% among men and from 15.5% to 32.5% among women during the 6-year period. Over the three surveys, smoking

Table 2. Numbers of Smokers and Smoking Prevalence by Socio-demographic Factors, Survey and Urban/Rural Status of the Regional Health Authorities

Each cell shows: unweighted number; weighted number; weighted prevalence in percent (95% confidence interval).

Variable	Category	2000/01 Major Urban	2000/01 Minor Urban	2000/01 Rural	2002/03 Major Urban	2002/03 Minor Urban	2002/03 Rural	2004/05 Major Urban	2004/05 Minor Urban	2004/05 Rural
Sex	Male	776*; 240,730†; 28.7 (26.3-31.1)‡	388; 36,278; 30.0 (26.2-33.7)	968; 92,911; 32.8 (30.4-35.2)	633; 205,387; 23.3 (21.0-25.6)	318; 36,656; 28.1 (24.2-32.1)	719; 80,627; 27.9 (25.6-30.3)	629; 229,517; 24.9 (22.6-27.2)	344; 35,255; 26.5 (23.3-29.6)	539; 79,758; 27.4 (24.7-30.0)
	Female	726; 204,733; 24.5 (22.3-26.6)	351; 29,733; 24.8 (21.8-27.8)	912; 79,533; 29.1 (27.3-31.0)	624; 175,437; 20.0 (17.9-22.1)	283; 26,987; 21.4 (18.3-24.5)	729; 69,979; 24.9 (22.7-27.1)	543; 168,001; 18.2 (16.4-20.1)	315; 30,572; 23.8 (20.7-26.9)	520; 67,894; 24.2 (21.8-26.7)
Age group (years)	12-19	147; 40,108; 17.9 (14.7-21.0)	58; 6887; 18.9 (13.4-24.4)	167; 15,491; 18.3 (15.4-21.2)	109; 27,960; 12.2 (8.8-15.6)	67; 6552; 17.0 (12.4-21.7)	168; 15,026; 17.1 (13.8-20.5)	73; 25,328; 10.7 (7.7-13.6)	59; 5693; 15.6 (11.4-19.8)	66; 8179; 9.6 (7.1-12.2)
	20-39	644; 203,649; 32.2 (29.4-34.9)	341; 30,106; 34.3 (30.1-38.4)	812; 81,689; 40.9 (37.7-44.2)	552; 184,615; 27.8 (24.9-30.7)	253; 26,211; 28.3 (23.9-32.6)	540; 66,793; 34.7 (31.6-37.8)	511; 180,336; 27.0 (24.5-29.5)	276; 30,158; 32.9 (28.9-36.9)	433; 63,024; 33.8 (30.3-37.3)
	40-59	546; 164,617; 29.4 (26.5-32.3)	285; 24,308; 32.6 (27.8-37.3)	684; 59,403; 33.4 (30.9-35.9)	439; 133,600; 22.5 (19.6-25.5)	217; 25,655; 31.0 (26.2-35.9)	536; 54,475; 28.9 (25.9-32.0)	426; 154,408; 23.9 (20.9-26.8)	245; 24,778; 28.1 (24.1-32.2)	396; 61,207; 30.7 (26.9-34.5)
	≥60	165; 37,089; 14.4 (11.9-17.0)	55; 4710; 11.3 (7.2-15.3)	217; 15,861; 16.9 (13.9-19.9)	157; 34,562; 12.8 (10.1-15.4)	64; 5225; 12.3 (9.2-15.4)	204; 14,399; 14.2 (11.9-16.5)	162; 37,446; 12.8 (10.4-15.3)	79; 5197; 11.4 (8.6-14.3)	164; 15,243; 15.1 (12.5-17.8)
Education level	<Secondary graduation	381; 110,571; 26.7 (24.0-29.4)	216; 18,595; 23.6 (19.9-27.4)	648; 56,116; 29.8 (27.2-32.5)	262; 71,188; 20.0 (16.6-23.3)	166; 16,773; 21.8 (18.1-25.6)	490; 47,461; 26.0 (23.4-28.5)	250; 83,999; 22.9 (19.7-26.2)	162; 15,980; 24.5 (20.5-28.6)	274; 34,348; 21.8 (18.8-24.8)
	Secondary graduation	338; 86,300; 31.0 (27.4-34.5)	150; 14,519; 31.0 (26.0-35.9)	397; 38,225; 36.1 (32.4-39.7)	303; 92,284; 28.9 (25.0-32.8)	154; 17,067; 34.9 (29.0-40.8)	144; 35,907; 31.9 (28.2-35.6)	242; 80,731; 28.4 (24.5-32.4)	144; 15,386; 33.5 (27.8-39.1)	225; 35,913; 35.9 (30.5-41.3)
	Some post-secondary	172; 51,790; 30.2 (25.2-35.2)	60; 5865; 29.1 (21.6-36.7)	145; 15,558; 36.1 (30.5-41.7)	137; 47,088; 28.9 (22.9-34.8)	67; 7025; 26.5 (18.4-34.7)	101; 13,783; 31.7 (24.8-38.5)	121; 40,891; 26.0 (21.2-30.8)	57; 5876; 23.6 (16.7-30.4)	80; 10,917; 22.8 (16.6-28.9)
	Post-secondary graduation	593; 174,192; 22.8 (20.5-25.0)	295; 25,573; 28.3 (25.1-31.5)	625; 56,790; 27.6 (25.3-29.8)	521; 156,790; 17.9 (15.8-20.0)	198; 20,704; 20.9 (17.4-24.5)	471; 47,924; 22.3 (19.9-24.7)	539; 184,525; 18.5 (16.5-20.5)	280; 26,996; 22.4 (19.3-25.4)	454; 62,409; 24.5 (21.9-27.1)
Household income	<$30,000	346; 79,991; 31.9 (28.3-35.5)	131; 10,432; 32.0 (26.8-37.1)	365; 26,400; 31.8 (27.9-35.7)	224; 44,101; 26.5 (22.0-31.1)	97; 8084; 29.0 (22.2-35.5)	252; 20,970; 30.3 (26.2-34.4)	250; 50,896; 30.4 (25.9-35.0)	116; 7907; 27.2 (21.9-32.5)	195; 19,867; 32.9 (27.9-38.0)
	$30,000-$49,999	288; 86,300; 31.0 (27.4-34.5)	121; 11,386; 27.2 (22.2-32.2)	335; 30,325; 33.5 (29.8-37.3)	238; 57,237; 26.6 (22.5-30.7)	71; 7216; 24.3 (17.9-30.7)	207; 19,052; 27.6 (23.4-31.9)	204; 50,953; 24.5 (20.4-28.6)	76; 7347; 26.9 (20.7-33.2)	156; 19,736; 30.1 (25.1-35.0)
	$50,000-$79,999	322; 104,383; 27.3 (24.3-30.4)	156; 14,489; 28.0 (22.8-33.1)	425; 40,011; 31.5 (28.3-34.7)	279; 82,740; 23.0 (19.8-26.1)	95; 10,419; 23.0 (16.5-29.5)	276; 31,684; 29.3 (25.2-33.5)	209; 76,534; 23.5 (19.8-27.2)	116; 12,116; 23.8 (18.6-29.0)	192; 28,635; 29.0 (24.5-33.5)
	≥$80,000	546; 174,789; 22.9 (20.5-25.3)	331; 29,704; 25.9 (22.4-29.5)	755; 75,707; 29.6 (27.1-32.1)	516; 196,746; 19.4 (17.3-21.5)	338; 37,924; 24.7 (21.7-27.8)	713; 78,900; 24.4 (22.3-26.5)	509; 219,135; 19.2 (17.3-21.1)	351; 38,457; 24.9 (21.9-27.9)	516; 79,413; 22.9 (20.6-25.2)
Immigrant status	Yes	187; 66,597; 17.5 (14.7-20.3)	54; 4447; 15.3 (10.6-20.1)	83; 5984; 15.9 (11.3-20.6)	159; 57,283; 15.0 (11.8-18.3)	50; 7229; 21.9 (14.3-29.5)	63; 7401; 19.9 (13.8-26.1)	161; 55,296; 14.4 (11.7-17.1)	48; 4776; 16.1 (10.5-21.7)	47; 6385; 18.0 (11.3-24.8)
	No	1296; 371,750; 29.3 (27.3-31.2)	680; 61,087; 29.1 (26.1-32.0)	1787; 165,841; 32.3 (30.5-34.1)	1088; 321,007; 23.7 (22.0-25.4)	530; 54,599; 25.4 (22.6-28.2)	1353; 140,086; 26.8 (25.1-28.5)	996; 336,351; 23.5 (21.7-25.3)	599; 59,833; 26.2 (23.9-28.6)	993; 138,057; 26.2 (24.3-28.1)

* Unweighted number of respondents who were current daily or occasional smokers
† Weighted number of respondents who were current daily or occasional smokers
‡ Weighted prevalence in percent (95% confidence interval)

Table 3. Socio-demographic Predictors of Smoking in Alberta – Final Weighted Logistic Regression Model

Variable	Category	n*	n†	OR (95 CI)‡	p Value
Sex	Male	5128	1,037,119	Ref	
	Female	4842	852,869	0.84 (0.80-0.88)	<0.001
Age group (years)	12-19	898	151,224	Ref	
	20-39	4219	866,581	4.09 (3.73-4.49)	<0.001
	40-59	3643	702,451	3.62 (3.30-3.97)	<0.001
	≥60	1210	169,732	1.08 (0.98-1.19)	0.14
Urban/rural RHAs§	Major urban RHAs	3831	1,223,805	Ref	
	Minor urban RHAs	1922	195,481	1.03 (0.97-1.10)	0.319
	Rural RHAs	4217	470,702	1.06 (1.00-1.11)	0.038
Education level	<Secondary school graduation	2816	455,031	Ref	
	Secondary school graduation	2276	434,570	0.90 (0.84-0.97)	0.006
	Some post-secondary school	932	198,793	0.69 (0.62-0.75)	<0.001
	Post-secondary school graduation	3946	755,903	0.50 (0.47-0.54)	<0.001
Household income	<$30,000	1945	268,648	Ref	
	$30,000-$49,999	1679	289,552	0.82 (0.75-0.89)	<0.001
	$50,000-$79,999	2045	401,011	0.65 (0.60-0.70)	<0.001
	≥80,000	4301	930,775	0.60 (0.57-0.65)	<0.001
Immigration status	Immigrant	836	215,398	Ref	
	Canadian-born	9134	1,648,611	2.08 (1.92-2.25)	<0.001
Year of survey	2001/02	3986	683,918	Ref	
	2003/04	3158	595,073	0.82 (0.77-0.86)	<0.001
	2005/06	2826	610,997	0.88 (0.83-0.93)	<0.001

* Unweighted number of smokers of the three surveys
† Weighted number of smokers of the three surveys
‡ Odds ratio (95% confidence interval)
§ Regional health authorities

was more prevalent among men than women in Alberta as a whole. However, in each survey, the smoking prevalence varied widely by RHA. In addition to the weighted prevalence, Table 1 also presents the estimated number of smokers in each RHA. While Calgary ranked lowest or second lowest for smoking prevalence in each of the three surveys for both men and women, the size of the smoking population was much greater than in any of the other RHAs, with the exception of Capital Health.

On the basis of the PUP, the nine RHAs were grouped into three categories: major urban RHAs, including Calgary and Capital Health (PUP: 93%, 91%); minor urban RHAs, including Palliser, Northern Lights and Chinook (PUP: 76%, 73%, 72%); and rural RHAs, including David Thompson, Peace County, East Central and Aspen (PUP: 60%, 58%, 50%, 46%). The weighted number of smokers and the prevalence were further cross-tabulated against the socio-demographic variables and urban/rural status of the three surveys (Table 2). As shown, both the smoking prevalence and the number of smokers were higher among men than women, in middle-aged groups (20-39 and 40-59 years) than in younger (12-19 years) and older (≥60 years) groups, and among Canadian-born people than immigrants to Canada. The smoking prevalence tended to 1) increase with the increasing rurality of the RHAs, 2) decrease over the three surveys, 3) be inversely proportional to educational level and 4) be inversely proportional to household income. However, when examined in terms of numbers of smokers in the three surveys, the smoking population was the largest in the major urban RHAs and among those who reported the highest educational achievement and highest household income.

The above associations were further examined using logistic regression (Table 3). As shown, the odds of being a smoker were significantly lower in women than men and about four times higher in those aged 20-39 and 40-59 years than in those aged 12-19 years and 60 years or older. The odds of being a smoker in Canadian-born participants were approximately twice as high as those observed in immigrants to Canada. The odds of being a smoker increased with increasing rurality of the RHAs and decreased with increasing educational level and household income. The odds of being a smoker were significantly lower during the second and third survey than during the first survey.

DISCUSSION

Tobacco smoking was essentially a male habit about half a century ago[14] but became more common among women after World War II.[15] In 1965, the smoking prevalence among Canadian women aged 15 years and older reached 38%, compared with 61% among men.[16] Over the past 30 years, tobacco use, especially among male Canadians, has decreased significantly, so much so that in 2005 the smoking prevalence among Canadian men and women aged 12 years and older was 24% and 20%, respectively.[9] Smoking has been widely reported to be more prevalent in the lower socio-economic classes,[17-19] and among Canadian-born people than Canadian immigrants.[20] The socio-demographic distributions of the smoking rates, as observed by this study, are consistent with the previous findings.

Several Canadian studies have examined the urban/rural variation in smoking rates.[21,22] According to Mitura and Bollman,[22] smoking prevalence was significantly higher in small towns, rural areas and northern regions of Canada. Our finding that smoking prevalence was positively associated with the rurality of the RHAs is consistent with these findings. It has been suggested that the differences may be associated with the fewer smoking restrictions in rural areas. This may be compounded by an over-representation of blue-collar jobs in rural areas relative to urban areas. Previously, smoking rates among those performing manual labour have been observed to be higher than those in non-manual occupations.[23,24] Our finding of higher smoking rates in the lower socio-economic groups does appear to support these findings.[5,19]

It should be noted that we also observed a negative association between the immigrant population and the rurality of the RHAs, immigrants accounting for an average of 22%, 12% and 7% (data not shown) of the population of the major urban, minor urban and rural RHAs, respectively, during the six years. The proportionately greater immigrant population in the urban RHAs may have contributed to the lower smoking prevalence in those regions. However, this potential contribution did not substantially change the

urban/rural smoking difference when immigration status was modelled as a covariate.

Studies from European countries have yielded different results with respect to smoking prevalence in urban areas.[25,26] It has been suggested that life in urban areas is more stressful than in rural areas,[27,28] and this explains the higher smoking rate in urban areas. According to a health behaviour model, people under stress are more likely to engage in behaviours that are detrimental to their health.[29] This model has been repeatedly supported by previous studies in the context of low socio-economic class in relation to smoking.[30,31] These results support our findings in the sense that the proportion of Albertans with low socio-economic status was higher in rural areas than in urban areas. For example, the per capita income and educational level in rural Alberta was lower than in urban Alberta.[32,33] How much other stressful events (e.g., stress at work or home) might contribute to the urban/rural smoking difference in Alberta is not known and may be worth further investigation.

Our finding that the smoking prevalence has been declining in Alberta coincides with the smoking trends observed for all of Canada. However, it should be noted that although the smoking prevalence among men fell over time, the number of Alberta men defined as smokers did not decrease substantially over time. Furthermore, in Capital Health, although the smoking prevalence among men dropped from 30% to 28%, the weighted number of smokers rose, because the number of smokers is a function of both smoking prevalence and population size. These findings illustrate that smoking prevalence should not be examined in isolation from absolute numbers of smokers.

Alberta is currently establishing new tobacco legislation to prevent initiation of tobacco use and to increase motivation to quit, by increasing tobacco taxes, restricting smoking in public places and prohibiting tobacco retail displays.[34] Although such strategies have been shown to be effective in decreasing smoking prevalence in other jurisdictions,[34,35] our findings suggest that additional strategies may have to be employed if the numbers of smokers in the large urban RHAs are to be reduced. Given that the smokers in these regions tend to have higher income, it is conceivable that financial penalties associated with the new tobacco legislation may have less impact in such regions than in the regions of lower socio-economic status. Smoking control programs targeting these regions may lead to more effective reduction of the smoking population and the overall smoking prevalence in Alberta.

This study was conducted using data from three consecutive surveys that had high response rates and consistent methodology, making the data highly comparable across these surveys. Since the surveys depended on respondents' self-report of their smoking status, a potential for misclassification of information exists. Such misclassification, if it exists, is likely to be consistent across the three surveys and should have minimal impact on the smoking trends examined.

CONCLUSIONS

Although the new tobacco legislation being introduced in Alberta in 2009 may have a positive impact on smoking reduction, targeted interventions tailored to the regions or groups with the largest numbers of smokers may help further reduce the smoking population and the overall smoking prevalence in Alberta.

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RÉSUMÉ

Objectifs : Déterminer le nombre de fumeurs et la prévalence et les tendances du tabagisme et examiner leurs associations sociodémographiques en Alberta à l'aide des données de trois enquêtes nationales sur la santé menées au Canada entre 2000 et 2005.

Méthode : Les trois enquêtes ont recueilli des données sur la santé déclarées par des Canadiens de 12 ans et plus. Nous avons calculé le nombre pondéré de fumeurs et la prévalence du tabagisme selon la région sanitaire et le statut urbain ou rural. Les associations sociodémographiques du tabagisme en Alberta ont été examinées au moyen d'une analyse de régression logistique.

Résultats : Le nombre de fumeurs et la prévalence du tabagisme étaient tous les deux plus élevés chez les hommes que chez les femmes; dans les groupes d'âge moyen (20 à 39 ans et 40 à 59 ans) que dans les groupes plus jeunes (12 à 19 ans) ou plus vieux (≥60 ans); et chez les personnes nées au Canada que chez les immigrants au Canada. La prévalence du tabagisme avait tendance : 1) à augmenter plus le lieu de résidence était rural; 2) à diminuer au cours de la période à l'étude; 3) à être inversement proportionnelle au niveau d'instruction; et 4) à être inversement proportionnelle au revenu du ménage. Les fumeurs étaient les plus nombreux dans les zones urbaines et parmi les répondants ayant déclaré le niveau d'instruction et le revenu du ménage les plus élevés.

Discussion : Le projet de loi antitabac déposé en Alberta en 2009 pourrait réduire la prévalence du tabagisme dans la province, mais des interventions supplémentaires dans les zones qui comptent le plus grand nombre de fumeurs pourraient contribuer à réduire encore davantage la population des fumeurs et la prévalence globale du tabagisme en Alberta.

Mots clés : tabagisme; prévalence; tendances; facteurs sociodémographiques; santé publique

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