

Prevalence of E-cigarette Use among Canadian Youth & Young Adults

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Background

Electronic cigarettes (e-cigarettes) are devices that deliver nicotine through vaporization of a solution.

A recent study of adult smokers based in Canada, the United States, the United Kingdom and Australia indicated rates of 8% and 3% for ever use and current use of e-cigarettes, respectively.¹ Similar rates have been reported among adults in the United States.^{2,3}

Presently, e-cigarettes containing nicotine cannot be imported, marketed or sold in Canada without authorization from Health Canada.⁴ However, despite these restrictions, e-cigarettes with and without nicotine are widely available for sale.⁵

The current study sought to examine prevalence and perceptions of e-cigarette use among Canadian young adults.

Methods

A sample of 1,188 participants aged 16-30 were recruited from an online panel of Canadians in July 2012. The panel was not representative of the Canadian population, but consisted of a diverse socio-demographic profile. After viewing an image of an e-cigarette, respondents answered questions regarding use and perceptions of e-cigarettes.

Results

Table 1: Sample Characteristics

Characteristic	Non-Smokers n=708 % (n)	Former Smokers n=74 % (n)	Current Smokers n=406 % (n)	Total n=1,188 % (n)
Age	16-19	28.7 (203)	4.0 (3)	14.5 (59)
	20-24	38.3 (271)	23.0 (17)	31.0 (126)
	25-30	33.0 (234)	73.0 (54)	54.5 (221)
Sex	Male	49.6 (351)	37.8 (28)	33.7 (137)
	Female	50.4 (357)	62.2 (46)	66.3 (269)
Ethnicity	White	63.3 (448)	82.4 (61)	71.2 (289)
	Non-white	36.7 (260)	17.6 (13)	28.8 (117)
Education	Low	32.8 (232)	37.8 (28)	40.9 (166)
	Moderate	40.2 (285)	41.9 (31)	34.0 (138)
	High	27.0 (191)	20.3 (15)	25.1 (102)

Results continued

Table 2: Prevalence of E-cigarette Use (%)

Characteristic	Ever Use of E-cigarettes				Current Use of E-cigarettes			
	Non-Smokers	Former Smokers	Current Smokers	Total	Non-Smokers	Former Smokers	Current Smokers	Total
All	5.2	18.9	34.5	16.1	0.8	1.4	15.0	5.7
Age	16-19	5.9	33.3*	33.9	12.5	0.5	0.0*	10.2
	20-24	5.5	29.4*	41.3	17.4	0.7	5.9*	20.6
	25-30	4.3	14.8	30.8	16.9	1.3	0.0	13.1
Sex	Male	4.8	17.9*	33.6	13.2	0.9	3.6*	13.1
	Female	5.6	19.6	34.9	18.3	0.8	0.0	16.0
Ethnicity	White	6.0	19.7	35.3	17.7	0.7	1.6	17.0
	Non-white	3.8	15.4*	32.5	12.8	1.2	0.0*	10.3
Education ^a	Low	6.5	14.3*	39.8	20.0	0.9	0.0*	13.9
	Moderate	5.6	19.4	37.7	16.3	0.7	0.0	16.7
	High	3.1	26.7*	21.6	10.4	1.0	6.7*	14.7

* Due to small sample size (n<30), results should be interpreted with caution

^a Education: Low = high school or less; Moderate = technical/trade school, community college, or some university but no degree; High = university degree or more

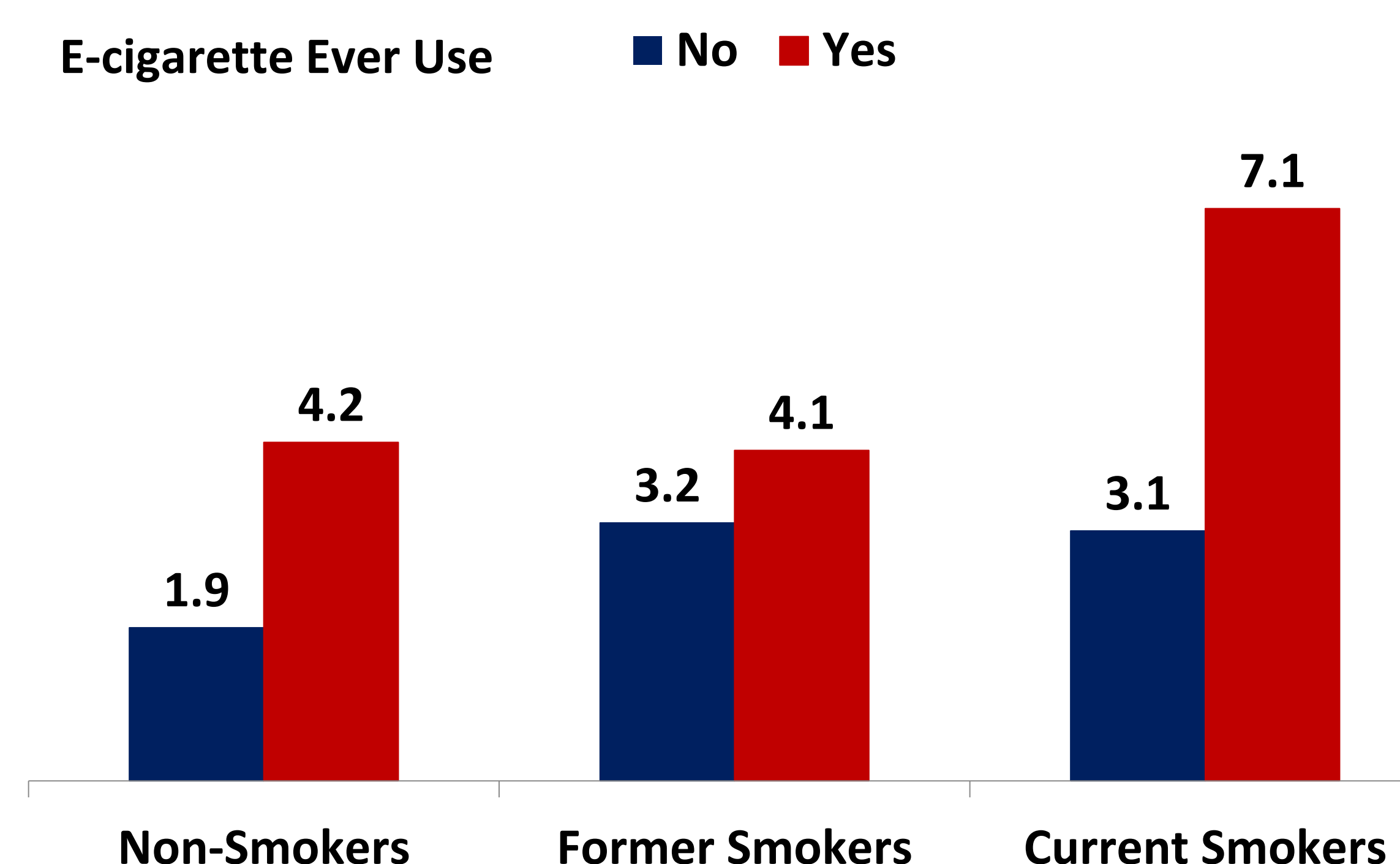
Table 3: Predictors of E-cigarette Use

Characteristic	Model 1: Ever Use of E-cigarettes		Model 2: Current Use of E-cigarettes		
	OR (95% CI)	p-value	OR (95% CI)	p-value	
Age	20-24 vs. 16-19	1.39 (0.83-2.32)	0.21	1.71 (0.60-4.85)	0.31
	25-30 vs. 16-19	0.95 (0.57-1.59)	0.84	1.18 (0.41-3.36)	0.76
	25-30 vs. 20-24	0.68 (0.46-1.00)	0.05	0.69 (0.34-1.40)	0.30
Sex	Female vs. Male	1.02 (0.72-1.46)	0.90	1.11 (0.55-2.24)	0.78
	Ethnicity	Non-white vs. White	0.82 (0.56-1.21)	0.31	0.66 (0.31-1.43)
Education	Moderate vs. Low	0.89 (0.60-1.31)	0.54	1.30 (0.63-2.69)	0.48
	High vs. Low	0.49 (0.30-0.81)	0.005	4.29 (1.60-11.50)	0.004
	High vs. Moderate	0.56 (0.35-0.90)	0.02	3.29 (1.26-8.62)	0.15
Smoking Status	Former Smoker vs. Non-Smoker	4.25 (2.11-8.56)	<0.001	0.29 (0.03-2.84)	0.29
	Current Smoker vs. Non-Smoker	9.84 (6.52-14.86)	<0.001	4.43 (1.64-11.94)	0.003
	Current Smoker vs. Former Smoker	2.32 (1.24-4.35)	0.009	15.15 (1.80-125.00)	0.012

Among e-cigarette ever users (n=191), 12% reported experiencing side-effects or adverse events. Only 10% of ever users were "not at all" likely to recommend e-cigarettes to a friend.

Results continued

Figure 1: Interest in Trying E-cigarettes [1 = Not at all, 10 = Extremely]



Approximately 80% of smoking e-cigarette ever users reported interest in trying e-cigarettes to help them quit smoking, as a long-term replacement for cigarettes or to use in places/times where/when they cannot smoke.

Conclusions & Implications

Despite current restrictions on e-cigarettes in Canada, almost one fifth (16%) of young adults reported trying e-cigarettes, with evidence of use among non-smokers.

Future research should examine the content of e-cigarettes in Canada to determine compliance with the ban on nicotine.

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