Patterns of cigarillo use among Canadian young adults in two urban settings

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ABSTRACT

OBJECTIVES: Current estimates indicate that cigarillo use has become commonplace among young adults in Canada despite the established risks to health. However, little else is known about patterns of cigarillo use in this subpopulation. The intent of this research was to examine the patterns, attitudes, and beliefs regarding cigarillo use and co-use of cigarillos and cigarettes among Canadian young adults.

METHODS: Canadians aged 19-29 years from the Greater Toronto Area, Ontario and Edmonton, Alberta were recruited from September 2009 to February 2010 and in June 2010, respectively (n=133). Eligible participants completed questionnaires assessing cigarillo, cigarette, and cannabis use; social influence of usage; and beliefs about cigarillo use.

RESULTS: Cigarillo use was common in social settings, with friends, and during leisure time. The majority of participants were co-users of cigarillos and cigarettes (82%), and currently used cannabis (72%). Respondents reported “replacing cigarette smoking” and “flavour” as main reasons for smoking cigarillos; and half (52%) believed they were not at all addicted to cigarillos. Disconcertingly, participants perceived the risk of cancer attributed to smoking cigarillos as significantly less than the risk of cancer attributed to smoking cigarettes ($p < 0.0001$).

CONCLUSION: These findings highlight the social nature of cigarillo use, and suggest a lack of awareness of the health risks associated with cigarillo and polytobacco use in this small convenience sample of Canadian young adults. Population-level analyses are needed to further investigate cigarillo, polytobacco and concurrent cannabis use patterns and beliefs among Canadian young adults.

KEY WORDS: Cigar smoking; tobacco smoking; marijuana smoking; young adult; adult

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Cigarillo smoke contains levels of toxicants comparable to those of cigarette smoke;^{1,2} the deleterious health effects associated with smoking cigarillos are many and include lung, oral cavity, and esophageal cancers.^{3,4} Despite these documented health risks, cigarillo smoking is a major form of tobacco use among Canadian young adults. In 2011, nearly half (47%) of Canadians aged 20 to 24 years reported having ever smoked cigarillos;⁵ 7% of Canadian young adults (20-24 years) reported having smoked cigarillos in the previous 30 days.⁶ Furthermore, sales of cigarillos in Canada have increased dramatically in the past decade, from 53 million units sold in 2001 to 467 million units sold in 2009,¹ as has been the case in the United States.⁷

Previous research conducted in the US suggests that cigarillo use and polytobacco use is higher among males and younger adults,⁸ is a social activity,⁹ and may be associated with risk-taking behaviour.⁸ To date, no studies have focused specifically on cigarillo smoking among young adults in Canada. Thus, the objectives of this first-blush analysis were to characterize cigarillo use, initiation, and co-use; and to explore beliefs regarding the health implications consequent to cigarillo use in a small sample of Canadian young adults prior to the implementation of federal restrictions¹⁰ on the sale of single and flavoured cigarillos.

METHODS

Sample

A convenience sample of cigarillo users from the Greater Toronto Area (GTA), Ontario and Edmonton, Alberta were recruited through advertisements in local entertainment newspapers, local online classifieds, posters, and by word of mouth. The GTA sample was recruited between September 2009 and February 2010; the Edmonton sample was recruited in June 2010. Eligible participants reported having smoked cigarillos in the previous

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30 days, resided in either survey site, and were between 19 and 29 years of age. Respondents received \$15 as compensation for completing the 30-minute online survey. A total of 133 young adults (GTA: n=101; Edmonton: n=32) completed the online survey.

Initially intended to be a case-control design comparing cigarillo usage between provinces with (Ontario: Bill 124)¹¹ and without (Alberta) legislation barring the sale of flavoured and single cigarillos, similar federal legislation (Bill C-32)¹⁰ enacted during data collection nullified this study design. Still, analysis of the combined GTA and Edmonton sample provides insight into cigarillo usage among young adults in two major Canadian metropolitan areas.

Measures

The online survey assessed patterns of cigarillo use, cigarette and cannabis use, age of initiation, and beliefs regarding the health consequences associated with smoking cigarillos. Co-users of cigarillos and cigarettes were those who indicated currently smoking cigarettes every day or occasionally.

Definitions distinguishing little cigars, cigarillos, and large cigars often overlap,^{10,12} and the terms little cigar and cigarillo are at times used interchangeably in health research. In this study, cigarillos were cigar products (tobacco in the form of a tube, wrapped in natural or reconstituted tobacco leaf) weighing no more than 1.4 g or containing a cigarette-like filter.

Analysis

Frequencies were computed for categorical data; medians were computed in lieu of means where data were skewed for a more accurate measure of central tendency. The Wilcoxon signed rank sum test was used to assess significant differences between medians for age of initiation and for risk of cancer attributed to smoking cigarillos and cigarettes. Data analysis was conducted using SAS version 9.1.

The University of Toronto Research Ethics Board and the Alberta Cancer Research Ethics Committee reviewed and approved all study procedures.

RESULTS

Sample demographic characteristics are presented in Table 1. The mean age of respondents was 23.6 years (± 3.2), and the majority were male (75%). Though many respondents indicated having some (34%) or having completed post-secondary education (28%), most reported an annual income of less than \$30,000 (71%).

Forty-eight percent of respondents reported smoking cigarillos on a weekly basis and 32% on a monthly basis; cigarillo use was common in social settings, during leisure time, and with friends (Figure 1). Most respondents reported smoking flavoured cigarillos (77%), being co-users of cigarillos and cigarettes (82%), and currently using cannabis (72%). Daily cigarillo use was less common than daily cigarette use (20% vs. 48%, respectively), and respondents were older when they began smoking cigarillos than when they began smoking cigarettes (median age 18 vs. 16 years, respectively; $p < 0.0001$) and began using cannabis (median age 18 vs. 16 years, respectively; $p < 0.0001$).

The primary reasons reported for smoking cigarillos were because of the flavour (56%) and to replace smoking cigarettes

Table 1. Demographic characteristics of 19-29 year old Canadian cigarillo users, N=133

Age, mean $\pm$ SD	23.6 $\pm$ 3.2
Sex, n (%)	
Male	100 (75.2)
Female	33 (24.8)
Education, n (%)	
Less than high school	16 (12.0)
Completed high school	30 (22.6)
Some post-secondary	45 (33.8)
Completed post-secondary	37 (27.8)
Other	5 (3.8)
Income*, n (%)	
<\$20,000	56 (47.1)
\$20,000-\$29,999	28 (23.5)
$\geq$ \$30,000	31 (26.1)
Don't know	4 (3.4)
Type of occupation†, n (%)	
Sales and service occupations	37 (33.0)
Business, finance and administrative occupations	21 (18.8)
Trades, transport and equipment operators and related occupations	18 (16.1)
Occupations in social science, education, government service and religion	11 (9.8)
Occupations unique to processing	11 (9.8)
Occupations in art, culture, recreation and sport	4 (3.6)
Occupations unique to primary industry	4 (3.6)
Natural and applied sciences and related occupations	3 (2.7)
Management occupations	2 (1.8)
Health occupations	1 (0.9)

* N=119

† Based on the National Occupational Classification for Statistics, N=112.

Table 2. Main reasons for smoking cigarillos and beliefs regarding level of addiction to cigarillos among 19-29 year olds, N=132

Main reasons for smoking cigarillos, n (%)*	
Because of the flavour	75 (56.4)
To replace smoking cigarettes	40 (30.1)
Because they burn slower than cigarettes	21 (15.8)
To feed nicotine craving after quitting cigarettes	15 (11.3)
Because my friends smoke cigarillos	14 (10.5)
Because they cost less than cigarettes	13 (9.8)
Other	13 (9.8)
Perceived level of addiction to cigarillos, n (%)	
Not at all addicted	68 (51.5)
Somewhat addicted	53 (40.2)
Very addicted	11 (8.3)

* Respondents were able to choose any response that was applicable, thus the proportions do not add to 100%; N=133.

(30%; Table 2). Though the majority reported inhaling when smoking cigarillos (72%), many indicated that they were not at all addicted to cigarillos (52%; Table 2). Furthermore, 38% of respondents rated their own risk of developing cancer in the next 20 years from cigarettes as greater than the risk attributable to cigarillos (median rating 7 and 5 out of 10, respectively; $p < 0.0001$).

DISCUSSION

Findings from this study highlight advanced use of tobacco products and concurrent cannabis use. In this sample, concurrent use of cigarillos and cigarettes was commonplace (82%). This finding exceeds previous estimates of polytobacco use among young adults (22-26%).^{8,13,14} The rate of concurrent cannabis use observed in this sample (72%) also exceeds earlier reports (27-33%).⁸ That cigarillo users reported using both cigarettes and cannabis concurrently is not surprising, as cigar use among US college students has been shown to be associated with the use of other tobacco products and marijuana;¹³ and Canadian young adults who are polytobacco users are more likely than cigarette-

Figure 1. Patterns of use among 19-29 year old Canadian cigarillo users (where, when, and with whom respondents use cigarillos), N=133

only smokers to use other substances like alcohol and illicit drugs.¹⁴ Additionally, this sample was composed mainly of young adult males, which may further account for the exceedingly high polytobacco and cannabis usage reported herein.^{8,14,15}

Respondents reported having smoked their first cigarette significantly earlier in life than smoking their first cigarillo, suggesting that cigarillo smoking is associated with more advanced use of cigarettes.^{13,16} The majority of respondents in this study and in others^{9,17,18} also reported inhaling while smoking cigarillos – a practice more common among former or current cigarette smokers.³ Notably, the amount of nicotine absorbed from inhaling cigarillo smoke is enough to initiate or sustain nicotine dependence,^{3,17,19,20} especially among co-users of cigarillos and cigarettes.^{3,19} Nevertheless, many respondents reported being not at all addicted to cigarillos despite smoking cigarettes concurrently and inhaling while smoking, suggesting a possible misperception regarding the contribution of smoking cigarillos to nicotine dependence.

Similarly, respondents generally underestimated the health risks associated with cigarillo use. The possibility that respondents may consider smoking cigarillos as less harmful than smoking cigarettes has been documented elsewhere,^{9,21-24} and is worrisome considering that the risk of lung cancer associated with cigarillo and cigarette use has been shown to be equivalent.²⁵ What's more, tobacco smokers who use marijuana have fewer quit attempts and are less likely to quit smoking tobacco, especially if using marijuana on a daily basis.²⁶

These findings and others^{9,27} also point to a considerable social component to cigarillo use which may reinforce the potential influence of peers on the uptake and maintenance of cigarillo smoking.

Finally, a possible omission in tobacco use prevalence estimates has been reported previously: individuals who use alternative forms of tobacco but do not smoke cigarettes are not considered current or ever smokers using standard definitions.^{28,29} Estimates from 2007 indicate that 4% of Canadians aged 20-24 years currently smoke cigarillos, but not cigarettes.²⁸ A study of high school students reported similar findings.¹⁶ In this sample, 18% of respondents reported smoking cigarillos but not cigarettes – a finding that reinforces the likelihood that current and ever tobacco use are being underestimated in both the young adult and total populations in Canada.

Limitations

Due to the convenience method used to recruit participants, whether individuals who chose to participate in this study differed in any way from individuals who chose not to participate is not known. Additionally, data collection was conducted by self-report; thus, the data may have been subject to under-reporting, as well as social desirability bias. Furthermore, young adults who speak French only were likely missed as the online questionnaire was offered only in English. Finally, the conclusions in this study are not generalizable as this sample is not representative of the general population of 19-29 year olds in Canada. Indeed, considering the high rates of both current polytobacco and concurrent marijuana use observed in this sample, it may be that this study has captured the usage trends of a group of individuals more highly involved in tobacco and illicit drug use. The extent of this combination of advanced tobacco and cannabis use in the general Canadian young adult population is not known and warrants further investigation.

CONCLUSION AND IMPLICATIONS

Notable findings suggest that among Canadian young adults, polytobacco use and concurrent cannabis use is common, awareness of the associated health risks is lacking, cigarillo use is predominantly a social behaviour, and common reasons for cigarillo smoking are to replace cigarette smoking and for the flavour. Considering the prevalence of cigarillo smoking among young adults and the established risks of adverse health associated with cigarillo and polytobacco use, future research should seek to more systematically examine patterns and attitudes regarding cigarillo use, using nationally-representative data in order to further characterize use in this high-risk group.

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RÉSUMÉ

OBJECTIFS : Selon les estimations actuelles, l'usage de cigarillos s'est banalisé chez les jeunes adultes au Canada malgré ses risques démontrés pour la santé. Cependant, on n'en sait guère plus sur les habitudes d'usage des cigarillos dans cette sous-population. Nous avons cherché à examiner les habitudes, les attitudes et les croyances liées à l'usage de cigarillos et au co-usage de cigarillos et de cigarettes chez les jeunes adultes canadiens.

MÉTHODE : Des Canadiens âgés de 19 à 29 ans vivant dans la région du Grand Toronto (Ontario) et à Edmonton (Alberta) ont été recrutés de septembre 2009 à février 2010 et en juin 2010, respectivement (n=133). Les participants admissibles ont rempli des questionnaires d'évaluation sur leur usage des cigarillos, des cigarettes et du cannabis; l'influence sociale de cet usage; et leurs croyances au sujet de l'usage de cigarillos.

RÉSULTATS : L'usage de cigarillos était courant dans des situations sociales, entre amis et dans les temps libres. Les participants étaient en majorité des co-utilisateurs de cigarillos et de cigarettes (82 %) et des consommateurs actuels de cannabis (72 %). Les principales raisons citées par les répondants pour expliquer leur usage de cigarillos étaient le « remplacement de l'usage de la cigarette » et « l'arôme »; et la moitié (52 %) croyait n'avoir aucune dépendance aux cigarillos. Curieusement, les participants percevaient le risque de cancer imputé à l'usage de cigarillos comme étant beaucoup moins important que le risque imputé à l'usage de cigarettes (p<0,0001).

CONCLUSION : Ces constatations soulignent la nature sociale de l'usage des cigarillos et donnent à penser que dans ce petit échantillon de commodité de jeunes adultes canadiens, on méconnaît les risques sanitaires associés à l'usage de cigarillos et au poly-usage de tabac. Des analyses populationnelles sont nécessaires pour étudier plus avant les habitudes et les croyances liées à l'usage de cigarillos et au poly-usage de tabac, ainsi qu'à la consommation parallèle de cannabis, chez les jeunes adultes canadiens.

MOTS CLÉS : usage de cigares; usage de cigarettes; consommation de marijuana; jeune adulte; adulte