

Contraband Native Tobacco On Post-Secondary Campuses in Ontario, Canada

Poster presented at 2010 Society For Research On Nicotine And Tobacco Annual Meeting, Baltimore, Maryland, Feb 24-27

Meagan Barkans MA(c), Community Health Sciences, Brock University
Kelli-an Lawrance PhD, Community Health Sciences, Brock University

This research is supported by an Ashley Studentship for Research in Tobacco Control
In kind support from Leave The Pack Behind, a Smoke-Free Ontario initiative, Government of Ontario

Introduction

The availability of inexpensive 'Native' contraband tobacco in Ontario and Quebec (Canada) and New York (U.S.A) threatens to undermine tobacco control strategies aimed to reduce smoking uptake and escalation. This may be especially true for young adults given that: (1) they are sensitive to tobacco prices; (2) escalation of cigarette smoking occurs during young adulthood; and (3) lower tobacco costs are associated with the higher rates and prevalence of smoking.^{1,2,3}

Purpose

This study examines the presence of contraband cigarettes on Ontario post-secondary campuses in order to answer the following questions:

1. Of cigarette butts discarded what proportion are contraband?
2. Does the proportion of contraband cigarette butts differ across:
 - a) 2-year, diploma granting college and 4-year, degree-granting university campuses?
 - b) smaller and larger city-size campuses?
 - c) geographical regions? (Central East, Central South, Central West, East, North, South West and Toronto)?

Methods

A sample of 13 colleges and 12 universities representing diverse sizes, locations and student populations was selected from the 24 colleges and 19 universities in Ontario. At each school, cigarette butts were collected on a single day from four locations: near the student building/university centre; on the grounds of the campus pub; at an on-campus, high-traffic bus stop; and near a campus residence. All data collection occurred in March and April, 2009.

Collected cigarette butts were sorted into three categories according to their filter-tip logos:

- 1) legal (i.e., brand name cigarettes)
- 2) contraband/Native cigarettes (e.g., Putters, DK's, Sago, unlabelled)
- 3) unknown (i.e., burnt, blackened, squished beyond recognition)

The proportion of contraband cigarette butts was calculated in two ways:

Conservative calculation

Numerator includes *only* butts that visual inspection conclusively identified as contraband/Native

Imputed calculation

Numerator includes butts visually identified as contraband/Native + a proportion of unknown butts assumed to be contraband/Native*

**Assumption: proportion of contraband cigarettes among 'unknown' butts matches proportion of contraband calculated for sample*

The denominator for both calculations was the total number of butts.

Results

More than 36,000 cigarette butts were collected.

Contraband/Native cigarette butts were found on all campuses accounting for as little as 1% to as much as 38% of the total cigarette butts at a particular school.

Proportion (%) of Contraband Cigarette Butts by Region							
	North	Central West	Central East	Central South	East	South West	Toronto
Overall	28.73	19.10	12.94	9.97	9.13	7.74	5.64
School 1	38.32	22.51	18.91	19.46	17.69	16.05	6.93
School 2	38.14	15.69	6.96	9.90	13.74	8.83	5.78
School 3	32.94	-	-	6.35	2.62	4.69	5.43
School 4	25.08	-	-	4.15	2.45	1.38	4.41
School 5	9.29	-	-	-	-	-	-

Number of schools in each region varies. Imputed calculation reported.

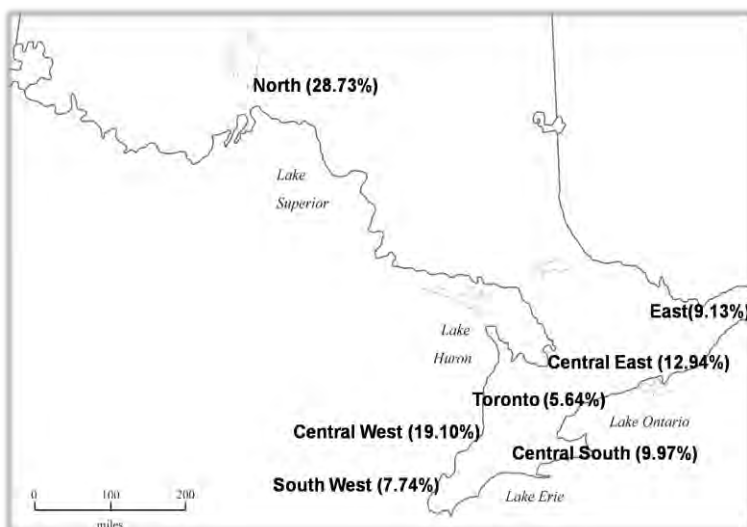
$F(6) = 4.61, p = .005$

Proportion (%) of Contraband Cigarette Butts		
	Conservative	Imputed
All post-secondary campuses	11.26	13.50
Type of Institution ^a		
2-year, diploma granting college campuses	12.74	15.53
4-year, degree granting university campuses	9.66	11.30
City Size (where institution is located) ^b		
smaller (<120,000)	16.80	20.27
larger (>120,000)	5.27	6.17

^a $t(23) = 0.967, p = 0.344$

^b $t(23) = 4.21, p = 0.000$

Schools in the North region had a significantly higher proportion of contraband tobacco compared to schools in all other regions, except Central West. None of the other regions differed significantly from one another.



Discussion

No other studies have examined use of contraband/Native tobacco on Canadian campuses. Using unobtrusive data collection methods (to eliminate self-report biases that might arise from the illegal nature of contraband tobacco use), we determined that contraband/Native cigarettes comprised 13.50% of the 36,000⁺ discarded cigarettes collected from 25 college and university campuses.

Contraband/Native tobacco use was apparent on all campuses, and varied considerably from school to school (1.38% to 38.32%).

While the proportion of contraband/Native tobacco was roughly equivalent on college (15.53%) and university (11.30%) campuses, schools in the North had higher rates of contraband/Native tobacco than schools elsewhere in the province, and higher proportions of contraband/Native tobacco were observed on campuses located in smaller (vs. larger) cities.

Implications

The similarity in prevalence of contraband/Native tobacco on college and university campuses was unexpected given that socio-environmental characteristics of college and university campuses are typically distinct. This finding underscores the importance of reaching both university and college campuses with anti-contraband tobacco education. Northern campuses and those in smaller cities may be especially important targets of such education given the observed patterns of use.

Campus health professionals need to understand that individuals who smoke cheaper cigarettes report lower quitting intentions, less successful cessation, and higher cigarette consumption.^{4,5} Cessation interventions on campus should reflect this understanding. Campuses may also wish to support policies that reduce availability of contraband tobacco on or near campus.

Further research is needed to determine who uses contraband tobacco, why they are using it, and whether it is increasing consumption and decreasing intention to quit. Answers to these questions will address whether the presence of contraband is indeed undermining efforts to reduce smoking prevalence among post-secondary students.

Works Cited

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Correspondence can be addressed to:

Kelli-an Lawrance, Ph.D., Community Health Sciences Department, Brock University, 500 Glenridge Avenue, St. Catharines, ON, Canada, L2S 3A1/ kelli-an.lawrance@brocku.ca

Meagan Barkans, MA(c), Leave The Pack Behind, Plaza 515, Brock University, 500 Glenridge Avenue, St. Catharines, ON, Canada, L2S 3A1/meagan.barkans@brocku.ca