

Smoking Initiation in Young Adulthood: How Late Initiators *differ* from Early Initiators

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Introduction

Research has demonstrated that most smokers start smoking during adolescence. However, several studies suggest that between 10% - 25% of post-secondary students transition from non-smoking or social smoking to regular smoking during their time on campus. Additional research is needed to examine this phenomena and determine what predicts students smoking initiation after starting university.

The purpose of this study was to:

- examine how many Ontario university students started smoking before vs. after entering university (i.e., early vs. late initiators).
- compare early vs. late initiators in terms of their: demographic characteristics and the social influences they experienced during high school and now in university.

Methods

In November 2005, approximately 136,267 students from 10 universities received email invitations to complete an anonymous, on-line questionnaire about tobacco, marijuana and alcohol use; social correlates of smoking, perceptions of campus smoking-related policies and social attachment. The universities included in the sample were representative of Ontario's 19 four-year, degree-granting universities in terms of size, location, programs and student demographics. Students in this sample represented 2.2 % of the entire population of university students in the province of Ontario. Data were weighted to account for geographic distribution and gender.

A total of 6, 831 students completed the online survey (response rate >5%). Given the purpose of this study, this analysis included those survey items that addressed:

- students' past and current use of tobacco and alcohol and demographic characteristics (age, gender, living arrangements, living with a smoker)
- students' social environments: how connected they felt to their high school and to their university; how common they perceived smoking to be among high school and current university peers and whether they felt pressure from peers to smoke.
- how common students' perceive alcohol use to be on campus.

Results

Sample. Only full-time, undergraduate students between the ages 17 – 25 were retained in the final sample. This resulted in a final sample of 6,196 students. Of students comprising this sample: 25% were first-year students; 24% were in second year; 30% were in third-year and 19% were in the fourth year of their studies. Just over half (54%) of the students lived off-campus; 24% lived at home; and 22% lived in residence. The average age that students started university was 17.8.

Tobacco use. In this sample, **23%** of students reported currently using tobacco at least occasionally and 18.5% of students say that they are or have been a ‘smoker.’

Initiation. Among students who have *ever been a smoker*, 67% became smokers **before** entering university (average age = 15.2 years) and 33% of students became smokers **after** starting university (average age= 18.5 years).

Comparisons of students who started to smoke before and after entering university.

	Early initiator	Late initiator	χ^2
Gender			
male	37%	57%	*
female	63%	43%	
Place of residence			
off campus	60%	15%	<i>ns</i> (.171)
at home	26%	21%	
on campus	14%	64%	
Live with smoker(s)	47%	47%	<i>ns</i> (.531)
Currently using tobacco	75%	89%	*
Current self-perception			
non-smoker	27%	13%	*
non-smoker who smokes	18%	15%	
light smoker	14%	30%	
regular smoker	41%	42%	
Currently using alcohol	93%	95%	<i>ns</i> (.053)

* significant at $p = .000$

Chi-square analyses revealed that a greater proportion of early initiators were female. Interestingly, fewer early initiators were still using tobacco. An examination of students’ self-perception revealed that twice as many early initiators labeled themselves as non-smokers, whereas twice as many late initiators labeled themselves as light smokers. Use of alcohol in the past month is very high among both groups.

Comparisons of social influences experienced by early and late initiators

	Early initiator	Late initiator	<i>t</i>
connectedness to high school (8-item scale; min=1 / max=5)	3.44	3.45	ns (.637)
connectedness to university (11-item scale; min=1 / max=5)	3.29	3.34	.004
peer pressure to smoke (yes/no)	0.38	0.45	.007
high school smoking norm: perceived % of peers who smoked	36	29	.000
university smoking norm: perceived % of peers who smoke	29	32	.019
university alcohol use norm: perceived % of peers who drink	82	84	.002

Compared with early initiators, students who started to smoke later were more likely to feel connected to their university; feel pressure to smoke; perceive a higher smoking and alcohol norm. Early initiators were more likely than late initiators to perceive that more of their peers smoked in high school.

Logistic Regression of Initiation on Predictors

Predictors	O.R.	95% C.I.	<i>p</i>
Connectedness to university	1.54	(1.06, 2.25)	.024
High school smoking norm: perceived % peers who smoked	0.97	(0.96, 0.98)	.000
University smoking: Perceived % peers who smoke	1.03	(1.02, 1.04)	.000
University alcohol use norm: Perceived % peers who drink	1.02	(1.01, 1.03)	.000
Peer pressure (<i>referent group = yes</i>)	1.37	(1.08, 1.75)	.010
Sex (<i>referent group = male</i>)	2.19	(1.72, 2.79)	.000
constant	0.18		

*R*² = .15 (Nagelkerke) $\chi^2 = 154.90$, *p* < .000

Discussion

Clearly there remains a need for tobacco use prevention on post-secondary campuses: 33% of ever-smokers began smoking *after* entering university.

The results of this study demonstrated that the probability of initiating smoking after entering University is higher for students who:

- are male;
- feel connected to the university;
- feel peer pressure to smoke;
- perceive that smoking is more normative among university peers than it was among high school peers and;
- perceive alcohol use to be highly normative.

Recommendations

To prevent the initiation of smoking among 17-24 year old university students, administrators of post-secondary campuses should seriously consider:

- √ Implementing policies that reduce the visibility of smoking on campus
Policies such as: establishing designated smoking areas on campus and restricting the sale of tobacco on campus, decrease the visual stimulus to purchase and smoke tobacco. Banning the sale of tobacco on campus denormalizes tobacco use, and has been shown to decrease overall consumption.
- √ Training campus health professionals to implement clinical practice guidelines around brief tobacco interventions in campus clinics.
To ensure students who smoke can and do access smoking cessation supports available in campus clinics. Campus clinics should: **1 consistently** implement brief tobacco intervention protocols with all patients; **2** ask students if they use tobacco (vs. asking whether they are ‘smokers’); and **3** make easy-to-use, age-tailored (print) interventions readily available to ease concerns about resistance.
- √ Offering evidenced-based tailored programs to assist current smokers to quit
- √ Directing communication campaigns at breaking the pairing of alcohol and tobacco use
- √ Addressing peer pressure felt by male students

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