

# Appeal & Effectiveness of a Web-based Smoking Cessation Program for College Students: Results of a Randomized Study

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## Introduction

Leave The Pack Behind is a multi-campus, comprehensive tobacco control initiative aimed at reducing smoking prevalence and rates on post-secondary campuses in Ontario, Canada. LTPB provides *continuous* peer-to-peer programming that includes dissemination of self-help print resources, referrals to campus health care professionals for smoking cessation support, and sponsorship of an expansive website.

Given that post-secondary students are immersed in electronic communications and web-based information-gathering, LTPB recently added to its website a highly-interactive smoking cessation intervention tailored specifically to psychosocial attributes of young adult smokers. The intervention is based on LTPB's highly effective, 2-booklet smoking cessation resource called Smoke|Quit.

**Purpose:** This study examined the appeal and effectiveness of this new web-based intervention relative to the original Smoke|Quit booklets, and a usual care quit kit package.

## Methodology

**Participants:** 365 students from three Ontario universities enrolled in the study. All were self-reported smokers who voluntarily accessed LTPB's services, and gave consent to provide data for the study.

**Procedures:** Participants completed a confidential, pre-coded baseline questionnaire then received (at random) one of the three interventions. Over the next 12 weeks, participants used the intervention at their convenience, and received brief, pre-set email messages each week. At the end of 12 weeks, participants were emailed a link to the electronic, follow-up questionnaire, and reminded to complete it to be eligible for a \$50 prize.

## Interventions:

### 1. e-Smoke | Quit



e-Smoke | Quit is designed for post secondary smokers, using the same tone, style, information and behavioural strategies found in Smoke|Quit. Visitors follow personally-tailored, secure path of navigation through the resource. Interactive features include: a “quit clock” that lets users monitor how long they have been smoke free; pop-ups showing participants their personal progress; and automated re-entry, and re-population of any ‘notes to self’ the user has activated during earlier visits.

### 2. Smoke|Quit



This is a 2-booklet, age-tailored, stage-based self-help resource. *Smoke* targets smokers in the precontemplation stage. It offers a tongue-in-cheek view of smoking and the numerous social pressures to quit. *Quit* is designed for smokers in the remaining stages of quitting – i.e., those thinking of or trying to quit and stay smokefree. It includes cognitive and behavioural activities for the reader to implement; offers current research into quitting; and presents a quit-plan addressing issues of concern to post-secondary smokers.

### 3. Usual Care (Quit Kit)

The Quit Kit package contains a booklet on stress management, information on pharmacological aids, and novelty items.

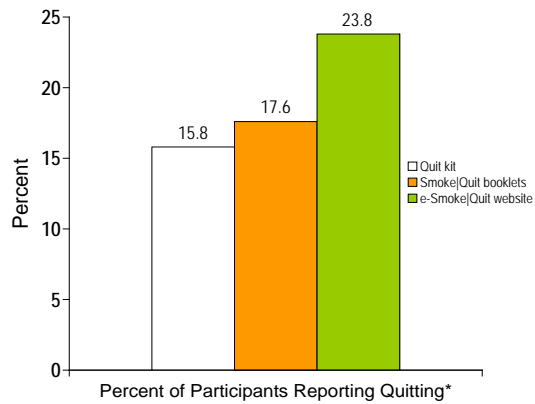
## Results

**Final Sample:** Follow-up data were provided by 55 smokers. Participants who did and did not provide follow-up data were compared. No differences were found between groups for these baseline measures: number of cigarettes smoked in the past week, motivation to quit, self-efficacy for quitting. Additionally, whether or not participants provided follow-up data was unrelated to intention to quit, self-perceived smoking status, and which intervention they received. Thus, the final sample was representative of the sample recruited.

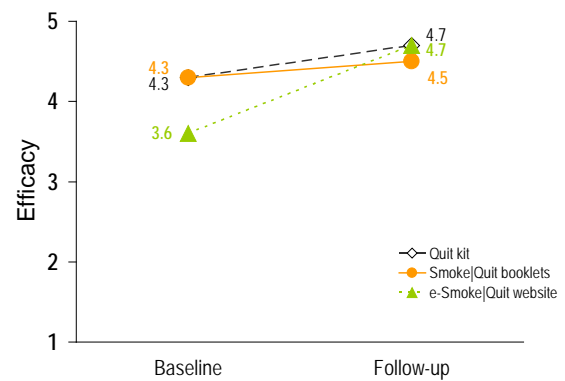
## Sample Characteristics

	<i>M</i>	<i>sd</i>
Number of cigarettes smoked last week	55.2	44.7
Motivation to quit smoking	3.2	1.2
Self-efficacy to resist smoking	3.5	1.3
Percent who plan to quit	78.2%	
Percent labeling self as daily smoker	83.6%	

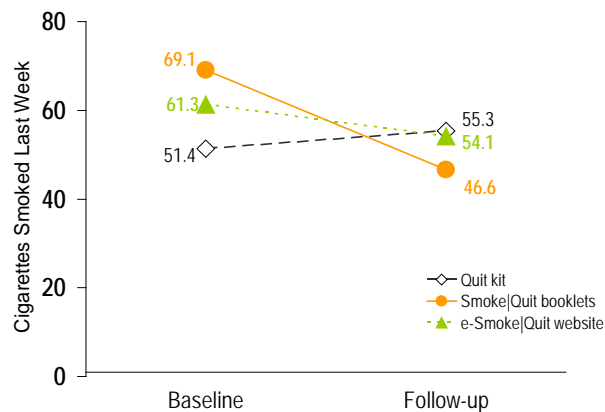
## Quit Rates by Intervention



## Changes in Quitters' Efficacy to Resist Smoking



## Changes in Continuing Smokers' Tobacco Consumption



### Participants reacted to the Smoke|Quit booklets and online program as follows:

booklets	website	
53.9%	52.8%	did some of the activities suggested
53.9%	68.4%	acted on the ideas that were presented
30.8%	42.2%	wrote/typed in answers to self-quizzes
77.0%	68.4%	agreed the program addresses issues that matter

*[None of these differences reached significance]*

### Participants' statements about e-Smoke|Quit website included the following:

- It was helpful since it kept quitting on my mind. I looked forward to seeing the e-mails. I've saved the e-mails and I hope they will assist me in quitting in the future =)
- Well I haven't quit.....but it definitely made me seriously consider it. The emails have something that hits home for everyone whether it be about their pets or money costs. The link about the true stories made me cry.
- Not very helpful, however I do know I want to quit & once I make the decision at least I have the material for my own benefit to help in the process.
- I found it interesting and it definitely puts me in the right direction to quit.
- I was motivated by some of the material provided to me. I was able to gather a support network of friends and family as was suggested. By talking to them about the information in the materials I let them know I was serious about quitting. Thanks for providing assistance!

## Conclusions

A new, on-line smoking cessation program tailored specifically to post-secondary students helped 23% quit. Among participants who did not quit, a parallel print program produced greater decreases in tobacco consumption. Both print and electronic programs were appealing. On-line programs have the potential to reach a larger proportion of the target audience, hence result in a greater population impact.