



Short Communication

School-based smoking cessation programs: Do youth smokers want to participate in these programs?

Scott T. Leatherdale *

*Division of Preventive Oncology, Cancer Care Ontario, 620 University Avenue, Toronto ON, Canada M5G 2L7
Department of Health Studies and Gerontology, University of Waterloo, Canada
Department of Public Health Sciences, University of Toronto, Canada*

Abstract

The purpose of the present study was to examine characteristics that predict interest in school-based cessation programs among 3136 youth smokers with intentions to quit smoking. The majority of youth smokers report that they would not join a school-based smoking cessation program. However, improving awareness of these types of programs among students is important as sub-populations of youth smokers were more likely to be interested in school-based cessation initiatives when aware that such programs exist. Future school-based cessation intervention outcomes might be improved if programs are targeted to the youth that are most likely to use them, if more youth can be made aware of existing programs, and if the benefits of participating in such programs can be more adequately conveyed to youth smokers.

© 2005 Elsevier Ltd. All rights reserved.

Keywords: Smoking/tobacco use; Cessation; School-based; Youth/adolescent; Prevention

1. Introduction

Despite the serious health risks of smoking, the youth smoking rate in Canada remains high (Health Canada, 2005). Given that earlier smoking initiation is associated with heavier, more frequent, and longer-term tobacco use (USDHHS, 1994), smoking cessation among youth provides a considerable public health benefit. Although the majority of youth smokers report that they would like to quit and

* Division of Preventive Oncology, Cancer Care Ontario, 620 University Avenue, Toronto ON, Canada M5G 2L7. Tel.: +1 416 971 9800x3237; fax: +1 416 971 7554.

E-mail address: scott.leatherdale@cancercare.on.ca.

have tried to quit in the past, most cessation attempts among youth are unsuccessful (USDHHS, 1994). As a result, there is an immediate need to improve cessation outcomes among youth.

A reason for the lack of cessation success among youth may be *how* they are trying to quit. Numerous cessation programs have been developed, yet most youth smokers report that they would rather try to quit smoking on their own (Leatherdale & McDonald, 2005). That tactic is the least effective cessation approach (Stanton, 1995).

Youth smoking cessation interventions tend to be school-based initiatives given their reach and relatively low cost (Mermelstein, 2003). However, school-based programs generally experience low attendance rates (USDHHS, 1994). As such, there is a need to support practitioners with information that will help them to promote school-based programs and to make future interventions more appealing to youth smokers. The purpose of this study was to examine factors that predict interest in school-based cessation programs among youth smokers with intentions to quit smoking.

2. Methods

This cross-sectional study used data from the School Health Action, Planning and Evaluation System (SHAPES) [the design of this project has been described in an earlier report (Leatherdale, Cameron, Brown & McDonald, 2005)]. The SHAPES Tobacco Module (a machine-readable questionnaire designed to measure tobacco use behaviour and potential determinants of tobacco use) was completed by 22,091 students from 29 secondary schools in Ontario, Canada. Of the 22,091 students, there were 3136 smokers who intended to quit smoking within the next 12 months: 874 (4.0%) occasional smokers (smoked >100 cigarettes lifetime, smoked more than once in the 30 days prior to the survey but did not smoke everyday or almost everyday), and 2262 (10.2%) regular smokers (smoked >100 cigarettes lifetime, smoked everyday or almost everyday in the 30 days prior to the survey). Respondents in grades 9 and 10 were classified as *Junior* students and respondents in grades 11, 12 and 13 were classified as *Senior* students. Smokers were asked if they would join a school-based program to help them quit smoking (Yes/No). Smokers were also asked to report if they were confident they could quit smoking (very sure/sure/unsure/very unsure), the number of times they have tried to quit smoking in the previous 12 months (0 to 4+), how many of their close friends smoke (0 to 5), and whether they are aware of cessation help available at their school (Yes/No).

3. Results

Among occasional and regular smokers who wanted to quit smoking, very few [13.1% ($n=411$)] were interested in using a school-based cessation program and the majority [74.5% ($n=2336$)] did not believe that cessation help was available at their school for students who wanted to quit. As displayed in Table 1, occasional smoking junior students aware of cessation help at their school were over twice as likely (OR 2.05) to be interested in school-based cessation programming. However, occasional smoking junior students confident in their own ability to quit smoking were less likely (OR 0.65) to be interested in school-based cessation programming. Regular smoking junior students were more likely to be interested in school-based cessation programming as the number of unsuccessful quit

Table 1

Logistic regression analysis examining factors that predict interest in using school-based smoking cessation programs to quit smoking among occasional smokers ($n=874$) and regular smokers ($n=2262$) with intentions to quit smoking in the next 12 months

Parameter	Standardized beta (standard error)	Odds ratio (95% CI)
Occasional smokers		
Junior students ($n=458$) ^a		
Gender	0.499 (0.296)	1.65 (0.92, 2.94)
Cessation self-efficacy	-0.430 (0.130)	0.65 (0.50, 0.84)***
Number of quit attempts	0.189 (0.112)	1.21 (0.97, 1.50)
Aware cessation help is available at school	0.719 (0.331)	2.05 (1.07, 3.93)*
Senior students ($n=416$) ^b		
Gender	-0.199 (0.364)	0.82 (0.40, 1.67)
Cessation self-efficacy	-0.301 (0.158)	0.74 (0.54, 1.01)
Number of quit attempts	0.027 (0.143)	1.03 (0.78, 1.36)
Aware cessation help is available at school	-0.347 (0.558)	0.71 (0.23, 2.11)
Regular smokers		
Junior students ($n=749$) ^c		
Gender	-0.158 (0.221)	0.85 (0.55, 1.32)
Cessation self-efficacy	0.028 (0.080)	1.03 (0.88, 1.20)
Number of quit attempts	0.229 (0.082)	1.26 (1.07, 1.48)**
Aware cessation help is available at school	0.301 (0.274)	1.35 (0.79, 2.31)
Senior students ($n=1513$) ^d		
Gender	0.147 (0.149)	1.16 (0.87, 1.55)
Cessation self-efficacy	-0.096 (0.055)	0.91 (0.82, 1.01)
Number of quit attempts	0.239 (0.056)	1.27 (1.14, 1.42)***
Aware cessation help is available at school	0.548 (0.179)	1.73 (1.22, 2.46)**

CI=Confidence Interval; * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Controlling for age and number of close friends who smoke. a=No Interest ($n=401$), Interest ($n=57$); b=No Interest ($n=381$), Interest ($n=35$); c=No Interest ($n=649$), Interest ($n=100$); d=No Interest ($n=1294$), Interest ($n=219$). Gender (male=1, female=0).

attempts in the previous 12 months increased (OR 1.26). Regular smoking senior students were also more likely to be interested in school-based cessation programming as the number of unsuccessful quit attempts in the previous 12 months increased (OR 1.27), or if they were aware of cessation help at their school (OR 1.73).

4. Discussion

These findings suggest that most youth smokers who intend to quit smoking are not aware that school-based smoking cessation programs are available at their school. Improving awareness of school-based programming is important, as youth smokers were more likely to want to participate in school-based cessation initiatives when they were aware that such programs existed. This finding is consistent with existing evidence suggesting that researchers and practitioners should consider developing methods for making youth more aware of existing programs and the benefits of participating in such programs (Balch et al., 2004).

Similar to [Leatherdale and McDonald \(2005\)](#), this study identified that the many youth smokers were not interested in participating in school-based cessation programs. Smokers self-assured that they could quit on their own were even less interested. These findings are particularly interesting in relation to occasional smokers. Due to their sporadic smoking behaviour, many occasional smokers do not consider themselves addicted to smoking ([Balch et al., 2004](#)), leading them to falsely believe that it would be easy to quit smoking. Considering that these smokers have the greatest success in cessation programs ([Sargent, Mott, & Stevens, 1998](#)), program outcomes might benefit by targeting these youth. This may be as simple as increasing awareness about cessation programming as young occasional smokers were over twice as likely to be interested in joining a school-based cessation program if they were aware programs were available.

Considering that the most common cessation aids provided to youth are school-based cessation programs ([Mermelstein, 2003](#)), it is important to ensure that those programs are successful; youth unable to quit smoking during high school generally continue to smoke for at least 16 to 20 more years ([Pierce & Gilpin, 1996](#)). Although this study found that smokers were generally not interested in participating in school-based programs, characteristics of smokers related to being interested in those programs were identified. For instance, regular smokers who unsuccessfully tried to quit smoking on their own in the previous year were more likely to be interested in school-based cessation programs, as were the students who were aware that programs were available at their school to help them quit. Therefore, participation rates in school-based programs might benefit if practitioners can make more smokers aware that help is available, or by targeting programs to youth who have unsuccessfully tried to quit smoking in the past.

These results suggest a need to review existing school-based programs based upon their general appeal to youth. Several priorities have already been identified for improving participation rates in school-based programs, such as communicating how formal cessation programs can improve their chance of successfully quitting compared to quitting on their own, using ex-smokers (both students and teachers) as program counselors, encouraging supportive friends to participate, increasing the confidentiality of programs, and offering programs during school hours ([Mermelstein, 2003](#); [Turner, Mermelstein, Berbaum, & Veldhuis, 2004](#)). The findings of this study suggest that a simple way to increase student participation might also include initiatives designed to increase student awareness of school-based programs. This type of initiative could take many forms, including school announcements, posters, or the help of teachers and student leaders. Additional research is required to evaluate if increasing awareness of program availability increases student participation rates in school-based cessation programs.

There are limitations with these findings that should be considered. These data were cross-sectional so causal relationships cannot be inferred. Longitudinal data would help to identify which youth are using school-based cessation programs and why, evaluate the effectiveness of cessation programs, and identify factors associated with school environments that encourage participation in existing programs. The study involved secondary data analysis so data were not available for all of the measures that would have been examined in an 'ideal' study. Most important, it was not possible to determine what method(s) students used in previous quit attempts or if students had participated in school-based cessation programs previously. These data were based on self-reports so the validity of the responses cannot be guaranteed, although efforts were taken to ensure that these data were robust. Measures have been previously demonstrated to be reliable and valid and students were ensured that their responses were confidential.

5. Conclusion

The current findings indicate that youth smokers most in need of cessation assistance are neither aware nor interested in school-based cessation programs. Future school-based cessation program participation rates and outcomes might be improved if more youth can be made aware of existing programs, if initiatives are targeted to the youth that are most likely to use them (e.g., regular smokers who have unsuccessfully tried to quit smoking in the past), and if the benefits of participating in a formal cessation program on quitting success can be more adequately conveyed to youth smokers.

Acknowledgements

The author would like to thank the Canadian Cancer Society/National Cancer Institute of Canada's Centre for Behavioural Research and Program Evaluation for providing financial support for this project. The data were collected with funds from the Social Sciences and Humanities Research Council of Canada (grant number 828-1999-1019 awarded to Roy Cameron).

References

- Balch, G. I., Tworek, C., Barker, D. C., Sasso, B., Mermelstein, R., & Giovino, G. (2004). Opportunities for youth smoking cessation: Findings from a national focus group study. *Nicotine and Tobacco Research*, *6*, 9–17.
- Health Canada. (2005). *Canadian tobacco use monitoring survey, wave 1 results, 2004*. Ottawa: Health Canada.
- Leatherdale, S., Brown, S., Cameron, R., & McDonald, P. (2005). Social modelling in the school environment, student characteristics, and smoking susceptibility: A multi-level analysis. *Journal of Adolescent Health*, *37*, 330–336.
- Leatherdale, S., & McDonald, P. (2005). What smoking cessation approaches will young smokers use? *Addictive Behaviors*, *30*(8), 1614–1618.
- Mermelstein, R. (2003). Teen smoking cessation. *Tobacco Control*, *12*, 25–34.
- Pierce, J. P., & Gilpin, E. (1996). How long will today's new adolescent smoker be addicted to cigarettes? *American Journal of Public Health*, *86*, 253–256.
- Sargent, J. D., Mott, L. A., & Stevens, M. (1998). Predictors of smoking cessation in adolescents. *Archives of Pediatrics and Adolescent Medicine*, *152*, 388–393.
- Stanton, W. R. (1995). DSM-III-R tobacco dependence and quitting during late adolescence. *Addictive Behaviors*, *20*, 595–603.
- Turner, L. R., Mermelstein, R., Berbaum, M. L., & Veldhuis, C. B. (2004). School-based smoking cessation programs for adolescents: What predicts attendance? *Nicotine and Tobacco Research*, *6*, 559–568.
- USDHHS. (1994). *Preventing tobacco use among young people: A report of the Surgeon General*. Atlanta, GA: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office of Smoking and Health; 1994.