

College Smoking Policies and Smoking Cessation Programs: Results of a Survey of College Health Center Directors

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Abstract. College students' cigarette smoking rose dramatically during the 1990s. Little is known about what colleges do to address the problem. Health center directors at 393 4-year US colleges provided information (response rate: 65.1%) about college policies addressing smoking and the availability of smoking cessation programs. Of the health center directors surveyed, 85% considered students' smoking a problem; yet only 81% of colleges prohibit smoking in all public areas and only 27% ban smoking in all indoor areas, including students' rooms in dormitories and in private offices. More than 40% of the respondents reported that their schools did not offer smoking cessation programs and that the demand for existing program was low. Colleges need to do more to discourage student tobacco use. Recommended actions include campus-wide no-smoking policies that apply to student residences and identification of new ways of providing smoking prevention and cessation services.

Key Words: cessation programs, college students, smoking, smoking policy, tobacco

The prevalence of cigarette smoking among college students has increased in the past decade. In 1997, the Harvard School of Public Health College Alcohol Study (CAS) found that 29% of students at a nationally representative sample of 128 US colleges were cigarette smokers, representing a 28% increase since 1993.¹ In a 1999 follow-up study of 119 of these colleges, the students' smoking prevalence remained high, although it did not rise further.² Similar findings have been reported in other surveys.³⁻⁵ The 1995 College Health Risk Behavior Survey

reported that 37% of college men and 29% of college women were smokers.³

Smoking rates among college students cited in another survey increased from 45% in 1995 to 50% in 1997.⁴ Johnson et al.,⁵ in the Monitoring the Future Study, reported that 30-day cigarette smoking prevalence in the cohort of college students they surveyed was relatively stable from 1986 to 1994, ranging from 21.1% to 34.5%, but increased thereafter, reaching 30% in 1998.⁶

With more than 12 million students enrolled in US colleges and universities,⁷ observers note that the rise in smoking rates among this population of young adults is a major public health concern. It is particularly disturbing because smoking rates are negatively correlated with educational attainment.^{6,8} College students' smoking prevalence is lower than that of youth of the same ages who are not attending college.^{6,8}

The college years appear to be a time of transition in smoking behavior, with many college students beginning to smoke regularly during college, whereas others who began smoking previously are attempting to quit.¹ New approaches directed at both the individual and the environment may be required to discourage tobacco use.

Little is known about college administrators' and student health directors' efforts to respond to the smoking problem. Because smoking has health consequences, student health services are natural sponsors for initiatives to prevent tobacco use and encourage smoking cessation. In addition, concerns about the hazards of exposing nonsmokers to environmental tobacco smoke (ETS) have led to the nationwide proliferation of smoke-free policies in schools, workplaces, and most public areas.⁹ Similar concerns about protecting students from ETS exposure provide a rationale for college policies prohibiting smoking in public areas and student residences.

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In this article, we report the results of a survey of 393 student health directors, presenting a national picture of current college interventions designed to discourage student smoking at 4-year colleges and universities in the United States. Our aims were to determine the degree to which health directors perceived student smoking to be a problem on their campuses, to provide an overview of current smoking education and cessation programs offered to students, and to assess the comprehensiveness of restrictions on smoking on college campuses.

METHOD

Sample

We mailed surveys to 737 student health center contacts drawn from the American College Health Association (ACHA) institutional membership list. We focused on 4-year institutions that granted bachelor degrees and therefore eliminated 133 2-year schools, institutions that were located outside the United States or US territories, or provided only postgraduate or professional study. Administrators from 393 of the 604 applicable 4-year institutions on the list responded, for a 65.1% response rate.

Questionnaire

The two-page questionnaire contained six questions. Respondents were asked their opinion about whether student smoking was a problem on campus (response categories were a major problem, a problem, a minor problem, and not a problem). They were also asked to report their college's on-campus smoking prohibition policy and to describe the availability and use of smoking cessation programs. Questions contained both forced-choice and open-ended components designed to elicit descriptive information regarding the availability and type of smoking cessation programs offered to students.

Mailing and Response Rate

We mailed questionnaires to the director of health services (or equivalent) at each college in February 1999 with an accompanying cover letter. Second and third questionnaires were sent in a 2-month period, along with cover letters notifying recipients that the response deadline date had been extended. Responses were voluntary and respondents were not required to identify themselves. By mid-March, 74.3% of the questionnaires had been returned; an additional 7.7% arrived by May 1, and the remaining 18% came in by the end of June.

Data Analysis

We carried out statistical analyses using SAS.¹⁰ The analyses focused on 3 outcomes: (a) respondents' perceptions of the extent of the student smoking problem at the school; (b) the extent of smoking restrictions on campus; and (c) smoking cessation services offered by the health center. We divided college smoking restrictions into three categories of increasing comprehensiveness: (a) smoking allowed in one or

more public areas; (b) smoking prohibited in public areas but allowed in residence hall rooms or in private offices; and (c) smoking prohibited in all indoor public and private areas. In addition, we divided smoking cessation services offered by schools into 3 categories: (a) group counseling or support programs; (b) individual programs, such as individual support and counseling or assistance from healthcare practitioner; and (c) self-help programs (eg, provision of printed educational or motivational materials).

We conducted univariate analyses to compare the characteristics of schools reporting that student smoking was "not a problem" or "a minor problem" with school reporting that smoking was "a problem" or "a major problem." Similarly, we used univariate analyses to identify characteristics of schools that prohibited smoking and those that offered smoking cessation programs. To assess the statistical significance of the differences observed, we used chi-square analysis.

We conducted four multiple logistic regression models to identify correlates associated with the outcomes of interest, adjusting for confounding. The outcomes of interest were (a) smoking as a perceived problem, (b) a policy prohibiting smoking everywhere, (c) a policy allowing smoking in public places, and (d) provision of smoking cessation programs. Because all of the colleges with religious affiliations were private institutions, we divided private schools further into private nonreligious colleges and private religious colleges in the multiple logistic regression models. This enabled us to distinguish the effects of private compared with public institutions and religious compared with nonreligious schools.

RESULTS

Sample Characteristics

The 393 schools were in 47 states and 3 US territories; they represented a cross-section of US institutions of higher education (Table 1). One third of schools (31.8%) were located in the Northeast, one third in the South (32.6%), one quarter in the North Central region (24.9%), and 10.8% in the West. More than half of the institutions (56.9%) were private and two thirds (65.1%) had no religious affiliation. Two thirds (65.5%) were in suburban or urban settings, and one third (34.5%) were in a rural area or small town.

We divided enrollment into three categories: large schools with more than 10,000 students (20.4%), medium-sized schools with 5,001 to 10,000 students (15.8%), and small schools with fewer than 5,000 students (63.9%). Three percent (2.8%) were commuter schools with no residence halls, and 3.8% enrolled only women. Overall, our sample differed from 4-year colleges nationally¹¹ in having fewer commuter schools, small colleges, and private institutions, but more schools with highly competitive admission standards.

Extent of the Problem and Smoking Policy Restrictions

Eighty-five percent of the college health center directors surveyed considered student smoking on their campuses as a problem or a major problem. In fact, respondents from all

TABLE 1
Characteristics of Colleges Surveyed in a Study
of Campus Smoking

| Characteristic | Study schools (<i>n</i> = 393) | | All schools† (<i>n</i> = 1,537) | |
|---------------------------|------------------------------------|------|-------------------------------------|------|
| | <i>n</i> | % | <i>n</i> | % |
| Commuter/residential‡ | | | | |
| Commuter | 11 | 2.8 | 143 | 9.3 |
| Not commuter | 382 | 97.2 | 1,394 | 90.7 |
| Academic competitiveness§ | | | | |
| Non/less competitive | 73 | 19.6 | 521 | 33.9 |
| Competitive | 165 | 44.3 | 588 | 38.2 |
| Highly competitive | 134 | 36.0 | 399 | 25.9 |
| Student enrollment | | | | |
| Small ≤ 5,000 | 251 | 63.9 | 1,153 | 75.0 |
| Medium 5,001–10,000 | 62 | 15.8 | 201 | 13.1 |
| Large > 10,000 | 80 | 20.4 | 183 | 11.9 |
| Sponsorship | | | | |
| Private | 214 | 56.9 | 1,005 | 65.4 |
| Public | 162 | 43.1 | 532 | 34.6 |
| Region | | | | |
| Northeast | 124 | 31.8 | 411 | 26.7 |
| South | 127 | 32.6 | 482 | 31.3 |
| North Central | 97 | 24.9 | 415 | 27.0 |
| West | 42 | 10.8 | 195 | 12.7 |
| Affiliation | | | | |
| Religious | 137 | 34.9 | 588 | 38.2 |
| Not religious | 256 | 65.1 | 949 | 61.7 |
| Location | | | | |
| Rural/small town | 135 | 34.5 | 557 | 36.2 |
| Suburban/urban | 256 | 65.5 | 980 | 63.8 |
| Coeducational status | | | | |
| Women | 15 | 3.8 | 34 | 2.2 |
| Coeducational | 377 | 96.2 | 1,504 | 97.8 |

†Data are for 4-year colleges and universities located in the United States and US territories as depicted in *Barron's Profiles of American Colleges*.

‡Commuter schools are defined as schools with no on-campus residences.

§Competitiveness is based on ACT and SAT scores and percentages of applicants accepted, as reported in *Barron's Profiles of American Colleges*.

types of colleges viewed smoking as a problem at their institutions (see Table 2). However, smoking was more likely to be perceived as a major problem ($p < .01$) by colleges that were public, by contrast with private institutions. Respondents at religiously affiliated colleges were less likely to perceive student smoking as a major problem at their schools ($p < .01$).

The data in Table 3 show how school smoking policies varied among noncommuter colleges. We excluded commuter schools from this analysis because commuter schools have no residence halls, therefore they did not fit in previously defined smoking policy models.

Most colleges (81.1%) prohibited smoking in all public areas, but only 26.6% prohibited smoking in all indoor areas, including student residences and private offices.

More than half (54.5%) of the schools' policies permitted smoking in private areas, such as residence hall rooms or private offices. Of the 18.9% that permitted smoking in one or more public areas, only 3 schools (4.2%) allowed smoking everywhere on campus. The most restrictive smoking policies were more often reported by private-sector institutions ($p < .01$), religiously affiliated institutions ($p < .001$), and schools located in the West ($p < .05$).

Availability of Cessation Programs

More than half of the respondents (55.7%) indicated that their college health centers offered some type of smoking cessation program for students. Data in Table 4 display the types of smoking cessation programs offered by these schools. Nearly half of the schools (48.2%) that offered programs provided cessation support groups on campus or through referrals to community-based groups, such as Nicotine Anonymous,¹² the American Cancer Society's FRESH-START program,¹³ or the American Lung Association's Freedom From Smoking program.¹⁴

Eight percent of the schools participated in the Great American Smokeout each November, and 5.3% provided smoking awareness programs (eg, workshops, lectures, and seminars) periodically throughout the year. Only a few schools offered health and wellness fairs (1.7%), peer education programs (1.3%), or quitting incentive programs such as giveaways and contests (1.8%) to students in their efforts to increase interest in smoking cessation.

Colleges were less likely to offer individual support and education than group strategies, such as those listed above, as a method of reducing smoking and encouraging students to quit smoking. Thirty-one percent of the schools offering programs provided individualized support through one-on-one sessions with health educators, counselors, or health services staff. One quarter of the schools (27.6%) offered students medical interventions, such as counseling, screening, assessment by a physician or clinician or prescriptions for Food and Drug Administration (FDA)-approved smoking cessation products, such as bupropion or nicotine replacement therapy, to assist in smoking cessation.

Schools reported little student demand for existing smoking cessation programs. Eighty-eight percent of the schools with programs reported they had no waiting list for the programs they offered; 6.2% of schools reported they had discontinued smoking cessation programs because of a lack of student demand. Such cessation programs (see Table 5) were less often offered at small colleges ($p < .01$) and the religiously affiliated colleges ($p < .05$).

Logistic Regression Results

The data in Table 6 present the results of multiple logistic regression models that we used to examine the correlates of perceiving smoking as a problem, prohibiting smoking everywhere, allowing smoking in public places, and providing smoking cessation programs.

TABLE 2
Perception of Student Smoking Problem on Campus,
in Percentages by College Characteristic

| Characteristic | <i>n</i> | No/minor problem % | A problem % | Major problem % |
|--------------------------|----------|--------------------------|-------------------|-----------------------|
| All colleges† | 385 | 15.1 | 59.0 | 26.0 |
| Sponsorship** | | | | |
| Public | 158 | 9.5 | 58.2 | 32.3 |
| Private | 210 | 19.5 | 58.6 | 21.9 |
| Enrollment | | | | |
| ≤ 5,000 | 245 | 17.5 | 59.6 | 22.9 |
| 5,001–10,000 | 61 | 11.5 | 49.2 | 39.3 |
| > 10,000 | 79 | 10.1 | 64.6 | 25.3 |
| Region | | | | |
| Northeast | 122 | 12.3 | 61.5 | 26.2 |
| North Central | 94 | 17.0 | 55.3 | 27.7 |
| South | 124 | 12.1 | 59.7 | 28.2 |
| West | 42 | 26.2 | 59.5 | 14.3 |
| Academic competitiveness | | | | |
| Non/less competitive | 71 | 12.7 | 62.0 | 25.3 |
| Competitive | 163 | 14.1 | 58.9 | 27.0 |
| Highly competitive | 131 | 17.6 | 57.2 | 25.2 |
| Commuter/residential | | | | |
| Commuter | 10 | 10.0 | 60.0 | 30.0 |
| Not commuter | 375 | 15.2 | 58.9 | 25.9 |
| Affiliation** | | | | |
| Religious | 134 | 22.4 | 57.5 | 20.1 |
| Not religious | 251 | 11.2 | 59.8 | 29.1 |
| Location | | | | |
| Rural/small town | 130 | 14.6 | 60.8 | 24.6 |
| Suburban/urban | 253 | 15.4 | 57.7 | 26.9 |
| Coeducational status | | | | |
| Women | 14 | 0.0 | 50.0 | 50.0 |
| Coeducational | 371 | 15.6 | 59.3 | 25.1 |

†Data for some colleges are missing; chi-square comparisons are significant as follows: ** $p < .01$.

Perception of Smoking as a Problem

When we controlled for the size of the school, we found that private religious colleges were significantly less likely than public schools to consider smoking to be a campus problem, odds ratio (OR) = 0.4 (confidence interval = 0.15–.88). When we controlled for religious affiliation, we found that the size of the school was not associated with the perception of smoking as a problem.

Policies Prohibiting Smoking

Schools where the health service directors perceived smoking as a problem were significantly less likely to prohibit smoking everywhere, OR = 0.3 (0.15–0.56), and more likely to allow smoking in at least one public place, OR = 3.6 (1.36–12.21). Private religious schools, compared with public schools, were significantly more likely to prohibit smoking everywhere, OR = 2.7 (1.51–4.87). Schools in the Northeast, OR = 0.2 (0.09–0.52), and North Central, OR 0.4 (0.17–0.94), regions were significantly less likely than schools in the West to prohibit smoking everywhere.

Provision of Smoking Cessation Programs

Schools whose respondents perceived student smoking to be a problem were significantly more likely than others to have smoking cessation programs, OR = 2.1 (1.12–3.93). Private nonreligious colleges were more likely than public schools to provide cessation programs, OR = 1.9 (1.01–3.83). Small schools were less likely than large schools to provide smoking cessation programs, OR = 0.4 (0.18–0.72).

Comments of Health Center Directors

Health center directors reported many challenges in addressing student smoking as a health concern and in developing on-campus cessation programs. Student attitudes, smoking styles, and reasons for smoking were commonly cited challenges. Directors indicated that students who currently smoked or who began smoking in college thought that they would quit once they graduated. These students saw themselves as infrequent or occasional smokers who were not addicted to cigarettes.

TABLE 3
School Smoking Policy, in Percentages by College Characteristic

| Characteristic | <i>n</i> | Prohibited everywhere % | Only allowed in residence hall rooms/ private offices % | Allowed in at least one public area % |
|--------------------------|----------|----------------------------|---|--|
| All colleges† | 380 | 26.6 | 54.5 | 18.9 |
| Sponsorship** | | | | |
| Public | 153 | 19.6 | 64.7 | 15.7 |
| Private | 210 | 31.4 | 46.7 | 21.9 |
| Enrollment | | | | |
| ≤ 5,000 | 247 | 29.5 | 49.8 | 20.6 |
| 5,001–10,000 | 58 | 24.1 | 60.3 | 15.5 |
| > 10,000 | 75 | 18.7 | 65.3 | 16.0 |
| Region* | | | | |
| Northeast | 121 | 16.5 | 62.0 | 21.5 |
| North Central | 93 | 28.0 | 51.6 | 20.4 |
| South | 121 | 29.7 | 52.9 | 17.4 |
| West | 42 | 45.2 | 42.9 | 11.9 |
| Academic competitiveness | | | | |
| Non/less competitive | 68 | 26.5 | 54.4 | 19.1 |
| Competitive | 161 | 31.1 | 53.4 | 15.5 |
| Highly competitive | 132 | 19.7 | 56.8 | 23.5 |
| Affiliation*** | | | | |
| Religious | 133 | 41.3 | 39.1 | 19.5 |
| Not religious | 250 | 18.6 | 62.7 | 18.6 |
| Location | | | | |
| Rural/small town | 133 | 24.1 | 51.9 | 24.1 |
| Suburban/urban | 246 | 28.0 | 55.7 | 16.3 |
| Coeducational status | | | | |
| Women | 15 | 20.0 | 60.0 | 20.0 |
| Coeducational | 365 | 26.8 | 54.2 | 18.9 |

†Comparisons exclude commuter schools; chi-square comparisons of percentages are significant as follows: * $p < .05$; ** $p < .01$; *** $p < .001$.

TABLE 4
**Provision of Smoking Cessation Programs,
 in Percentages by Program Type**

| Program | <i>n</i> | % |
|--|----------|------|
| Schools providing cessation programs | 214 | 55.7 |
| Active, group | | |
| Support groups (Fresh Start, Freedom from Smoking, etc.) | 110 | 48.2 |
| Great American Smokeout | 19 | 8.3 |
| Workshops, forums, lectures | 12 | 5.3 |
| Health/wellness fairs | 4 | 1.7 |
| Incentive programs (prizes, giveaways, Adopt-a-Smoker) | 4 | 1.8 |
| Peer education | 3 | 1.3 |
| Active, individual | | |
| Individual support/counseling | 71 | 31.4 |
| Medical intervention | 63 | 27.6 |
| Passive | | |
| Printed literature, educational materials | 34 | 14.9 |
| Curriculum integration | 1 | 0.4 |
| Other | 40 | 17.5 |

Many of these occasional smokers were undergraduate women who smoked in an attempt to control their weight. Students also become occasional smokers at college in response to stress, and respondents also mentioned personnel and financial resource limitations as major obstacles to providing effective smoking cessation programs.

COMMENT

To our knowledge, this is the first study to report on colleges' responses to the rising smoking rates among undergraduates. Our survey of the health directors at 393 US colleges (65.1% response rate) found that most of them considered smoking to be a problem for students at their schools. Most were attempting to counter the trend by offering smoking cessation programs and by instituting no-smoking policies on campus. Schools whose health administrators perceived smoking to be a problem were the most likely to offer smoking cessation programs.

However, these efforts may not be sufficient. Although more than half of the colleges surveyed offered smoking cessation programs, the student demand for these programs was reported to be low. Previous research has indicated that

TABLE 5
Provision of Smoking Cessation Programs, in
Percentages by College Characteristic

| Characteristic | <i>n</i> | Yes | No |
|--------------------------|----------|------|------|
| All colleges† | 384 | 55.7 | 44.3 |
| Sponsorship | | | |
| Public | 160 | 59.4 | 40.6 |
| Private | 207 | 53.1 | 46.9 |
| Enrollment** | | | |
| ≤ 5,000 | 245 | 49.4 | 50.6 |
| 5,001–10,000 | 62 | 66.1 | 33.9 |
| > 10,000 | 77 | 67.5 | 32.5 |
| Region | | | |
| Northeast | 120 | 59.2 | 40.8 |
| North Central | 95 | 45.3 | 54.7 |
| South | 125 | 57.6 | 42.4 |
| West | 41 | 68.3 | 31.7 |
| Academic competitiveness | | | |
| Non/less | 72 | 44.4 | 55.6 |
| Competitive | 163 | 59.5 | 40.5 |
| Highly competitive | 128 | 57.8 | 42.2 |
| Commuter/residential | | | |
| Commuter | 10 | 50.0 | 50.0 |
| Not commuter | 374 | 55.9 | 44.0 |
| Affiliation* | | | |
| Religious | 133 | 47.4 | 52.6 |
| Not religious | 251 | 60.2 | 39.8 |
| Location | | | |
| Rural/small town | 132 | 50.8 | 49.2 |
| Suburban/urban | 250 | 58.8 | 41.2 |
| Coeducational status | | | |
| Women | 14 | 50.0 | 50.0 |
| Coeducational | 369 | 55.8 | 44.2 |

†Data for some colleges are incomplete; chi-square comparisons of percentages are significant as follows: * $p < .05$; ** $p < .01$.

half of college student smokers had tried to quit smoking in the past year.¹ In spite of their self-reported interest in stopping smoking, students do not appear to be using existing campus resources. Further work is needed to define those interventions that will appeal to college students who smoke.

Private colleges with religious affiliations were less likely than public colleges to consider student smoking to be a problem; this may be related to the actual prevalence of smoking on campus. Students at these schools may be less likely to smoke; we previously found that students who considered themselves religious had lower rates of smoking.^{2,15} Private religiously affiliated schools were also more likely to have comprehensive smoking prohibitions on campus. These prohibitions may decrease the visibility of smoking and contribute to a perception that smoking is a less serious problem on these campuses. Health administrators at schools of all types where smoking was permitted in at least one public place were more likely to consider student smoking to be a problem.

Colleges also varied in the provision of smoking cessa-

tion programs on campus. Schools whose health center directors viewed smoking as a problem were more likely to offer cessation programs. By contrast, small private schools were less likely to offer cessation programs, perhaps because smaller schools may not have the financial or personnel resources to provide ongoing smoking cessation interventions.

The college years appear to be a time of transition in smoking behavior, with many college students beginning to smoke regularly during college, and others who began smoking before coming to college attempting to quit. New approaches need to be identified to help students at these various points of transition. For example, students who are occasional smokers may need programs to prevent them from becoming regular, nicotine-dependent smokers.

Because many students report they started smoking to handle stress or control weight, programs that help all students (including nonsmokers) cope with stress in healthful ways might discourage students from starting or continuing smoking. For nicotine-dependent smokers, the full range of treatment programs, including access to free or low-cost FDA-approved treatments should be available. New communication tools, such as the Internet, are widely used by college students and might be helpful in delivering smoking cessation interventions.

Healthcare professionals can be important in initiating interventions for student smokers. Chakravorty and Chakravorty¹⁶ found that only 7% of daily tobacco users reported having a college-based health or fitness professional advise them to quit. By using healthcare providers to screen for cigarette use during well-care visits, many colleges could drastically increase outreach efforts and provide immediate education and cessation information to student smokers. The greatest challenge health educators face when addressing tobacco use is how to develop tobacco cessation programs that attract students and how to encourage smoking cessation in this age group.

Reducing the visibility of tobacco use in the environment could also discourage students from starting to smoke and make quitting easier. Comprehensive no-smoking policies in the workplace are associated with declining smoking prevalence.⁹ A similar effect might be shown in colleges. In this study, we found that colleges that prohibited smoking widely were less likely to perceive that smoking was a problem on campus. However, because this is a cross-sectional study, we cannot determine the direction of causality.

Although most colleges already prohibit smoking in public areas, only one quarter extend these restrictions to student residences. A policy prohibiting smoking in college residences could protect nonsmokers from exposure to environmental tobacco smoke. It might also discourage smoking initiation and help smokers who are trying to quit avoid temptation. This is an important policy intervention that could benefit student health.

College students comprise the single largest group of young Americans legally accessible to the marketing campaigns of the tobacco industry. The college years are a cru-

TABLE 6
Logistic Regression Models Examining Correlates of Respondents' Views, Policies, and Programs:
Odds Ratios (OR) and 95% Confidence Intervals (CI)

| Variable | Smoking model | | | | | | | |
|---------------------------|---------------|------------|-------------------------------|-------------|--|-------------|---------------------------|-------------|
| | 1 | | 2 | | 3 | | 4 | |
| | A problem | | Smoking prohibited everywhere | | Smoking allowed in at least one public place | | Provide cessation program | |
| | OR | CI | OR | CI | OR | CI | OR | CI |
| Perceived smoking problem | | | | | | | | |
| Not a problem | — | — | 1.0 | — | 1.0 | — | 1.0 | — |
| A problem | — | — | 0.3 | 0.15–0.56** | 3.6 | 1.36–12.21* | 2.1 | 1.12–3.93* |
| Type of school | | | | | | | | |
| Public | 1.0 | — | 1.0 | — | 1.0 | — | 1.0 | — |
| Private nonreligious | 0.6 | 0.24–1.54 | 1.1 | 0.52–2.30 | 1.9 | 0.90–3.88 | 1.9 | 1.01–3.83* |
| Private religious | 0.4 | 0.15–0.88* | 2.7 | 1.51–4.87** | 1.6 | 0.81–3.02 | 1.3 | 0.70–2.50 |
| Size | | | | | | | | |
| Large (> 10,000) | 1.0 | — | — | — | — | — | 1.0 | — |
| Medium (5,000–10,000) | 1.0 | 0.33–3.04 | — | — | — | — | 0.9 | 0.42–1.79 |
| Small (≤ 5,000) | 1.0 | 0.33–2.56 | — | — | — | — | 0.4 | 0.18–0.72** |
| Region | | | | | | | | |
| West | — | — | 1.0 | — | 1.0 | — | — | — |
| North Central | — | — | 0.4 | 0.17–0.94* | 1.4 | 0.49–4.70 | — | — |
| South | — | — | 0.5 | 0.21–1.09 | 1.3 | 0.48–4.23 | — | — |
| Northeast | — | — | 0.2 | 0.09–0.52** | 1.5 | 0.53–4.71 | — | — |

* $p < .05$; ** $p < .01$.

cial period in the development or abandonment of smoking careers. College health centers can be an important source of assistance in smoking cessation attempts, not merely by providing smoking cessation programs, but also by motivating students to take advantage of the programs. The disparity between large numbers of students who are attempting to quit and the availability and participation in smoking cessation programs on many campuses must be remedied. At schools that are not smoke free, health center directors can also urge their college presidents to convert all public buildings and rooms, including private sleeping areas and offices, into nonsmoking areas.

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NOTE

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