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Authors	Seitz, Christopher M.;Kabir, Zubair;Greiner, Birgit A.;Davoren, Martin P.
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Student, Faculty, and Staff Approval of University Smoke/Tobacco-Free Policies: An Analysis of Campus Newspaper Articles

Christopher M Seitz¹, Zubair Kabir², Birgit A Greiner²
and Martin P Davoren²

¹Department of Health & Exercise Science, Appalachian State University, Boone, NC, USA.

²Department of Epidemiology and Public Health, University College Cork, Cork, Ireland.

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ABSTRACT

OBJECTIVE: To provide a nontraditional source of data to university policymakers regarding student, faculty, and staff approval of university smoke/tobacco-free policies, as published through campus newspaper articles.

METHODS: From January to April 2016, a total of 2523 articles were retrieved concerning campus smoking/tobacco at 4-year, public universities. Of these, 54 articles met the inclusion factors, which described 30 surveys about campus approval of tobacco-free policies and 24 surveys about smoke-free policies.

RESULTS: In all, the surveys included more than 130 000 respondents. With the exception of 4 surveys, all reported that the most of the respondents approved a tobacco/smoke-free campus policy.

CONCLUSIONS: Although the study had several limitations, the findings provide a synthesis from a nontraditional data source that is consistent with findings from the peer-reviewed literature, in which most of the students, faculty, and staff on university campuses approve of smoke/tobacco-free campus policies.

KEYWORDS: University, smoking, tobacco, policy, opinion

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CORRESPONDING AUTHOR: Christopher M Seitz, Department of Health & Exercise Science, Appalachian State University, 111 Rivers Street, PO Box 32071, Boone, NC 28608, USA.
Email: seitzcm@appstate.edu

Introduction

Tobacco use is a major health problem in the United States. Firsthand and secondhand smoke (SHS) are associated with negative health issues, including several types of cancer, respiratory problems, cardiovascular disease, and reproductive health issues.¹ Smoking is the leading cause of preventable death, killing an estimated 480 000 Americans each year.¹ It is also estimated that tobacco use costs US \$130 billion in direct medical costs and US \$150 billion in productivity loss every year.¹ Moreover, smokeless tobacco use is also harmful to health and associated with oral lesions, gum disease, tooth decay, and cancer of the mouth, esophagus, and pancreas.²

Tobacco use is also an important health issue on university campuses. The National College Health Assessment reports that the nation's university students are current users of several types of tobacco, including cigarettes (9.7%), e-cigarettes (4.9%), hookah (water pipes) (4.6%), cigars, little cigars or cloves (4.4%), and smokeless tobacco (2.5%).³ In addition, quantitative^{4–6} and qualitative^{7,8} research findings suggest that SHS exposure is a problem at universities without stringent tobacco policies. For instance, in one study, 45% of students report that SHS is difficult to avoid while outdoors on campus.⁹ Similarly, in a separate study, 77% of students report being bothered by outdoor SHS on campus.¹⁰

To address tobacco use, public health experts recommend the implementation of smoke-free policies as an evidence-based strategy. The Surgeon General,¹¹ Community Guide to Preventive Services,¹² American Lung Association,¹³ and the American College Health Association¹⁴ recognize empirical research findings that indicate tobacco-free policies are effective in reducing both firsthand and secondhand exposure to tobacco. As such, these organizations recommend that communities strive to implement comprehensive tobacco control policies.

Fortunately, there is a growing trend among colleges and universities in the United States to become smoke free or tobacco free. According to Americans for Nonsmokers' Rights, there were only 446 smoke-free campuses in 2010, whereas in 2016, there were more than 1400.¹⁵

In the process of becoming a smoke-free or tobacco-free university, an essential step is to assess the campus community's attitudes toward a comprehensive policy. The US Department of Health and Human Services' Tobacco-Free College Campus Initiative,¹⁶ Americans for Nonsmokers' Rights,¹⁷ and public health departments^{18,19} strongly suggest surveying students, faculty, and staff to gauge the community's overall opinion of a smoke-free (ie, prohibition of smokable tobacco products) or a



tobacco-free (ie, prohibition of smokable and smokeless tobacco products) campus. Survey results can demonstrate to policymakers the support of the campus for such a policy.

Although a number of peer-reviewed publications report campus opinion of tobacco policies, the findings have not been completely consistent. Several studies indicate that the most of the students, faculty, staff, and administrators approve of a transition to a smoke-free^{20,21} or tobacco-free campus.^{22–26} For example, Lupton and Townsend conducted a systematic review of 19 articles from both peer-reviewed and gray literature from the United States and the United Kingdom, finding that 58% of students and 68% of faculty supported smoke-free campus policies.²⁷

However, 2 studies suggest that only a minority support comprehensive policies. For instance, Thompson et al²⁸ show that only 32% of more than 14 000 students sampled from 30 different colleges in Idaho, Oregon, and Washington are in favor of prohibiting smoking outdoors. In addition, the study by Loukas et al²⁹ of a convenience sample of 1118 students (from a population of 39 020 students attending 5 colleges in Texas) had a much lower level of support for prohibiting smoking outdoors as compared with indoors. In other words, although most of the community members supported a smoke-free or tobacco-free campus, a couple of studies found less support for banning outdoor use.

Granted, an abundance of peer-reviewed literature exists regarding campus approval of tobacco policies; however, there has yet to be a synthesis of this topic from nontraditional data sources, specifically, campus newspapers. Given the potential for publication bias in peer-reviewed literature,²⁷ public health professionals value additional, supplemental data from nonacademic sources. Because several experts recommend that advocates publicize poll data of tobacco policy approval via student-run campus newspapers,^{16–19,30} the purpose of our study was to further examine this issue by reviewing survey findings published within campus newspapers. Even though news media are subject to several limitations, previous research has used the news as an adjunct source of data for traditional research methods.^{31–33}

This study attempted to answer several research questions. First, considering there are more than 1000 smoke-free universities in the United States,¹⁵ and because public health experts recommend gathering and publicizing poll data of tobacco policy approval via student-run campus newspapers,^{16–19,30} it could be assumed that there would be a plethora of newspaper publications regarding such polls, however, no one has yet investigated this issue. As such, this study will answer the question: How often are approval surveys published in online campus newspapers?

Second, although it is recommended that members of university campuses advocate for change by conducting opinion surveys, the methodology of such recommendations is vague, at best.^{16–19,30} It is important to understand how opinion polls on campus are actually implemented. Therefore, this study will

answer the questions: Who tends to conduct tobacco policy approval surveys? What research methods are used?

Finally, this study will serve to provide a synthesis from a nontraditional data source (ie, university newspapers) to answer the question: What percent of campus communities discussed in the articles approve of smoke-free or tobacco-free policies?

Methods

Prior to conducting the study, the Institutional Review Board at Liberty University determined that the study was exempt because all articles retrieved for the review were freely available online and did not include any identifying information of participants regarding survey results.

During January through April 2016, the government's National Center for Education Statistics' "College Navigator" Web site (<http://nces.ed.gov/collegenavigator/>) was used to locate universities. College Navigator gives users the option to filter institutions of higher education based on state location, public or private status, and length of degree options (eg, 4-year degree, 2-year degree).³⁴ College Navigator was filtered to select universities throughout the entire United States that are public and offer 4-year degrees. Universities that are private or only offer 2-year degrees were excluded from the study after an initial search found only a small number of student newspapers from these institutions. Moreover, public, 4-year universities tend to have larger enrollments, which would provide larger sample sizes for surveys regarding campus approval of tobacco policies. We also excluded universities that did not have a physical campus (ie, online universities) and thus no need for a campus tobacco policy.

Each university name was copied and pasted into an electronic document. The Internet was then used to search for each university's online student-operated newspaper. Universities were excluded from the study if they did not have a student newspaper or if the student newspaper was only available in print form due to the difficulty of obtaining and searching through archived print newspapers.

The search pane of each student newspaper was searched using a combination of the following terms: smoke, smoking, tobacco, policy, ban, survey, and vote. The term "vote" was included because student voting regarding a referendum also acts to gauge campus approval of tobacco policies. Each resulting article was copied and pasted into an electronic document and searched for a description of any survey or vote that was conducted regarding the campus community's approval of a new tobacco policy.

Articles were excluded if they were regarding smoke-free or tobacco-free policies but did not include information about campus surveys about tobacco policy approval. In addition, articles were excluded if the sample size of the survey was not specified or if the article was regarding tobacco policies other than comprehensive policies (eg, designated smoking areas, only prohibiting smoking a certain distance from building entrances). If an article cited multiple surveys conducted on campus, each survey was included in the study.

The articles were analyzed to determine the type of tobacco policy, who conducted the survey, the survey's methods, sample size, and percent of the sample's approval. Newspaper articles that reported Likert-based categories of percentage approval (eg, strongly approve, somewhat approve) were collapsed into a single percentage. Finally, to provide context of each survey, the universities' Web sites were also explored to determine the student enrollment as well as the smoking policy that was in place during the time of the survey.

Results

We located 510 online student newspapers from the 707 four-year universities in the United States. There were a total of 2523 articles retrieved concerning smoking or tobacco on campus. Of these, 51 articles met the inclusion factors, which described 30 surveys about campus approval of tobacco-free policies (Table 1) and 24 surveys about smoke-free policies (Table 2). Three articles described multiple surveys. The articles were published from 2007 to 2015. In all, the surveys included more than 130 000 respondents.

Surveys and votes were conducted most often by a form of student government ($n=19$, 35%) or a university-sanctioned tobacco/smoke-free task force/coalition/committee ($n=14$, 26%). Others who conducted surveys included service or academic departments within a university (eg, Safety Council, Department of Health Promotion), student-based public health clubs, students who conducted the survey as part of project for a class, college health/wellness centers, faculty senate/committee, lone faculty members, college presidents, and "the university" in general.

The most common survey methods included sending a survey (or opening a survey on a Web site) electronically to the entire campus ($n=18$, 33%) and opening the policy to be voted on by the entire campus ($n=6$, 11%). Other methods included sending the survey to a random sample of the population and recruiting a convenience sample to complete the survey. It is important to note that the methods of 24 (44%) surveys were not specified in the articles.

The universities included in the study had a variety of tobacco policies in place during the time of their campus surveys/votes. Specifically, 19 universities prohibited smoking at building entrances, ranging from 10 to 50 ft ($M=22.22$, $SD=9.74$, $Mdn=25$), with 1 policy vaguely prohibiting smoking "near" building entrances. There were 15 universities that prohibited smoking around building perimeters, ranging from 20 to 50 ft away from buildings ($M=29.67$, $SD=10.77$, $Mdn=25$). Of the universities in the study, 14 prohibited smoking on the entire campus, with the exception of designated smoking areas. There were 5 universities that did not prohibit smoking outdoors and 1 university that had adopted, but not yet implemented, a policy that prohibited smoking on the entire campus.

With the exception of 4 surveys, all reported that most of the respondents approved of a tobacco/smoke-free campus policy. Not every article reported an exact sample size. There

were 7 articles stating that surveys were "almost," "roughly," "nearly," or "over" a certain sample size. Similarly, 2 articles simply stated that a "majority" of survey respondents had approved of a tobacco/smoke-free policy, without giving an exact percentage.

Discussion

The current analysis of campus newspaper articles included in this study signals that most of the campus community members (eg, students, faculty, staff) who participated in the surveys or campus votes approved of comprehensive tobacco-free and smoke-free policies, regardless of the type of policy in place at the time of the survey. Granted, a large number of articles in the review did not report the sampling methods used in the surveys; however, the surveys that used random sampling or included the entire campus population had similar findings. In other words, even though the survey methods varied across studies, the overall finding of majority approval was consistent. These findings provide a synthesis from a nontraditional data source that reflects the peer-reviewed literature, in which most people would prefer a tobacco/smoke-free campus.²⁰⁻²⁷

It is noteworthy that there were universities with a relatively low percentage of approval for a tobacco/smoke-free campus. This may indicate either low interest in the topic or low support for tobacco- and smoke-free initiatives in these communities. However, the low approval may have been from the limitations of the surveys. At the University of Arkansas, the survey was administered to only students who lived on campus, which did not capture the opinion of those who lived off campus, or faculty/staff members of the community. Moreover, at the time of the survey, a tobacco-free policy had been recently adopted, but not yet implemented, which may have caused an increase in negative opinion during the transition between policies.⁴⁴

At the Missouri University of Science and Technology, although only 46% approved, even less disapproved (43%) of a more stringent policy.⁶⁶ Also, at the University of Idaho, 2 surveys were conducted, resulting in a majority and minority approval rating. The survey with the higher approval rating was considered the more scientifically rigorous of the 2 studies by the university's Director of Health and Wellness.⁷⁶

A number of campuses whose student government and/or task force conducted a survey suggest that the student body considered tobacco use as an important issue. According to the Tobacco-Free College Campus Initiative, a student government and tobacco-free task force should play a major role in assessing how many people on campus approve of a tobacco-free policy.¹⁶ The findings in this review suggest that those who advocate for a tobacco/smoke-free policy on their campus should consider collaborating with student government and/or campus tobacco task force.

Given the potential of publicizing survey findings through a campus newspaper, this study indicates possible areas of improvement. First, although the analysis of campus newspapers retrieved more than 50 articles, it was expected that more

Table 1. Campus survey methods and approval of a tobacco-free campus.

UNIVERSITY	POLICY AND ENROLLMENT DURING TIME OF SURVEY	SURVEY METHODS	N	APPROVAL, %
Central Michigan University ³⁵	In 2013, smoking was prohibited 25-ft from building entrances; Enrollment=19 634	The university conducted the survey ^a	N=4700 campus members	70
Eastern Illinois University ³⁶	In 2013, smoking was prohibited 15-ft from building entrances; Enrollment=9475	The Eastern Illinois University Tobacco Coalition sent the survey to all students and faculty to determine opinions of smoking	N=1386 students and faculty	58
Emporia State University ³⁷	In 2014, smoking was prohibited 30-ft from building entrances; Enrollment=6114	The Student Government sent the survey to all students and faculty to explore opinions about a potential policy	N=1300 students and faculty	70
Fort Hays State University ³⁸	In 2015, tobacco products were prohibited on campus except for designated parking lots; Enrollment=11 889	The Tobacco Policy Task Force sent the survey to all students in several series to gauge opinions as part of a grant-funded effort to obtain a tobacco-free campus	N=970 students	56
Missouri Southern State University ³⁹	In 2014, tobacco products were prohibited on the entire campus except for designated outdoor areas; Enrollment=5613	A vote was open to the entire student body after the Student Senate drafted an initial policy.	N=560 students	72
Northern Michigan University ⁴⁰	In 2013, tobacco products were prohibited 30-ft from buildings; Enrollment=8918	The university's President assigned research groups to conduct a survey, which was administered online to the entire campus community for 1 wk.	N=3208 students, faculty, and staff	60
Ohio University—Main Campus ⁴¹	In 2013, tobacco products were prohibited 25-ft from building entrances; Enrollment=38 857	The university's Tobacco Task Force sent the survey to all students and faculty in response to the Ohio Board of Regents recommendation that public universities consider implementing a tobacco ban	N=2000 students and faculty	65
University of Alaska Anchorage ⁴²	In 2014, smoking was prohibited 50-ft from buildings; Enrollment=18 649	The entire student body was invited to vote on a tobacco-free referendum	N=1347 students	51.6
University of Alaska Fairbanks ⁴³	In 2013, smoking was prohibited 50-ft from building entrances; Enrollment=9101	The Student Government conducted the survey ^a	N=141 students	52
University of Arkansas ⁴⁴	In 2007, a tobacco ban was adopted by the university but did not yet implement it; Enrollment=18 648	The student-run Residents Interhall Congress sent the survey via e-mail to every student living on campus	N=1428 students	42
University of California—San Diego ⁴⁵	In 2010, smoking was prohibited on campus except for designated parking lots; Enrollment=29 899	The university's Office of Student Wellness sent the survey to a random sample of students	N=505 students	67
University of Central Missouri ⁴⁶	In 2011, smoking was prohibited on campus except for designated smoking areas; Enrollment=11 637	The university's Tobacco Policy Committee conducted the survey ^a	N=1983 campus members	>50
University of Cincinnati ⁴⁷	In 2011, smoking was prohibited 25-ft from buildings; Enrollment=42 421	The survey was conducted by a smoking policy task force formed by the university's President. The survey was available online to all students, faculty, and staff for 3wk	N=2530 students, faculty, and staff	58.6
University of Colorado Boulder ⁴⁸	In 2012, smoking was prohibited inside buildings but permitted anywhere on university grounds; Enrollment=57 592	A senator from the Student Government conducted the survey ^a	N=358 students	54.6
University of Delaware ⁴⁹	In 2012, smoking was prohibited near building entrances; Enrollment=21 856	The Student Government conducted the survey ^a	N=2202 students	72

Table 1. (Continued)

UNIVERSITY	POLICY AND ENROLLMENT DURING TIME OF SURVEY	SURVEY METHODS	N	APPROVAL, %
University of Illinois at Springfield ⁵⁰	In 2013, smoking was prohibited on campus except for designated smoking areas; Enrollment=5137	The university's Survey Research Office conducted the survey ^a	N=910 students, faculty, and staff	38.3
University of Massachusetts Amherst ⁵¹	In 2011, smoking was prohibited 20-ft from buildings; Enrollment=7428	The Campus and Community Coalition to Reduce High Risk Drinking sent the survey to a random sample of students	N= ~2000 students	56
University of Nebraska at Kearney ⁵²	In 2014, smoking was prohibited 10-ft from building entrances; Enrollment= 7900	The Peer Health Education Club e-mailed the survey to all registered students	N=2091 students	66
University of Nevada—Las Vegas ⁵³	In 2012, smoking was prohibited inside buildings but permitted anywhere on university grounds; Enrollment=27 389	The Tobacco Free UNLV e-mailed the survey to all students	N=2525 students	75
University of Nevada—Las Vegas ⁵³	In 2010, smoking was prohibited inside buildings but permitted anywhere on university grounds; Enrollment=28 203	The Tobacco Free UNLV e-mailed the survey to all students	N= ~4000 students	74
University of South Carolina Beaufort ⁵⁴	In 2014, smoking was prohibited 25-ft from building entrances; Enrollment= 1400	The university conducted the survey ^a	N=550 students and faculty	66.5
University of Texas—Arlington ⁵⁵	In 2009, smoking and chewing tobacco was prohibited 50-ft from buildings; Enrollment=28 084	The Tobacco-Free Campus Initiative Committee e-mailed the survey to the entire campus community	N=3190 students, faculty, and staff	54
University of Toledo ⁵⁶	In 2014, smoking was prohibited on campus except for designated smoking areas; Enrollment=20 626	The Student Government made the survey available to all students online	N= ~5000 students	60
University of Wisconsin—Eau Claire ⁵⁷	In 2008, smoking was prohibited 25-ft from building entrances; Enrollment=10 889	A “nursing and environmental health study” on campus conducted the survey ^a	N=3483 students, faculty, and staff	58
University of Wisconsin—River Falls ⁵⁸	In 2012, smoking was prohibited 25-ft from buildings; Enrollment=6455	The Student Government e-mailed the survey to all students	N=695 students	70
University of Wisconsin—Whitewater ⁵⁹	In 2012, smoking was prohibited 25-ft from building entrances; Enrollment= 12 034	The Tobacco-free Campus Coalition conducted the survey ^a	N= 1496 students	56
Utah State University ⁶⁰	In 2005, smoking was prohibited 25-ft from building entrances; Enrollment=23 107	The Student Wellness Center conducted the survey ^a	N= 1664 students	78
Western Kentucky University ⁶¹	In 2010, smoking was prohibited on campus except for designated smoking areas; Enrollment=20 903	The Co-Chair of the Faculty Welfare Committee Survey e-mailed the survey to the entire campus community	N=3231 students, faculty, and staff	71
Western Michigan University ⁶²	In 2013, smoking was prohibited 25-ft from buildings; Enrollment=24 294	A committee assigned to implement a tobacco-free policy conducted the survey ^a	N= ~4000 students, faculty, and staff	>50
Wichita State University ⁶³	In 2015, smoking was prohibited 10-ft from building entrances; Enrollment= 14 495	The student-led advocate group “Tobacco Free Wu & Me” sent the survey to a random sample of campus members	N=557 campus members	65

^aNonspecified survey methods.

Table 2. Campus survey methods and approval of a smoke-free campus.

UNIVERSITY	POLICY AND ENROLLMENT DURING TIME OF SURVEY	SURVEY METHODS	N	APPROVAL, %
Auburn University ⁶⁴	In 2011, smoking was prohibited inside buildings, but permitted anywhere on university grounds; Enrollment=25 469	Senators of the Student Government sent the survey to their respective colleges and various student organizations	N=3750 students	64
Idaho State University ⁶⁵	In 2012, smoking was prohibited 20-ft from buildings; Enrollment=17 706	The director of the Master of Public Health program at the university conducted the survey ^a	N=314 students, faculty, and staff	60.7
Missouri University of Science and Technology ⁶⁶	In 2010, smoking was prohibited 15-ft from building entrances; Enrollment=6520	The Student Government sent out the survey through the annual student interest survey	N=1282 students	46
Oregon State University ⁶⁷	In 2010, smoking was prohibited 10-ft from building entrances; Enrollment=23 761	The Student Government conducted the survey ^a	N=4600 students	55
Portland State University ⁶⁸	In 2012, smoking was prohibited except for designated smoking areas; Enrollment=28 287	The Center for Student Health and Counseling conducted the survey ^a	N=4005 students, faculty, and staff	55
Purdue University—Calumet Campus ⁶⁹	In 2008, smoking was prohibited except for designated smoking areas; Enrollment=9300	Three nursing students conducted the survey ^a	N=1651 students and faculty	61
Radford University ⁷⁰	In 2012, smoking was prohibited 25-ft from buildings; Enrollment=9573	The Student Government opened a vote for a smoke-free policy	N= ~1600 students	51.4
San Diego State University ⁷¹	In 2013, smoking was prohibited except for designated smoking areas; Enrollment=33 726	The Student Government e-mailed the survey to the entire student body	N=1470 students	65
University of California, Davis ⁷²	In 2008, smoking was prohibited 25-ft from buildings; Enrollment=27 718	The university's Student Research and Information department conducted the survey ^a	N=8686 students	74
University of Central Arkansas ⁷³	In 2007, smoking was prohibited 25-ft from buildings; Enrollment=12 619	The Student Government e-mailed the survey to all university e-mail accounts	N=1822 students, faculty, and staff	53
University of Cincinnati ⁷⁴	In 2011, smoking was prohibited 25-ft from building entrances; Enrollment=42 421	The Student Government conducted the survey ^a	N=9030 students	66
University of Florida ⁷⁵	In 2009, smoking was prohibited 50-ft from buildings; Enrollment=50 844	The Student Government opened a referendum for all students to vote	N= ~10000 students	64
University of Idaho ⁷⁶	In 2012, smoking was prohibited 25-ft from buildings; Enrollment=11 707	The Student Government conducted the survey ^a	N=304 students	41
University of Idaho ⁷⁶	In 2012, smoking was prohibited 25-ft from buildings; Enrollment=11 707	A group of students created the survey for a class project, which developed into the University of Idaho Tobacco Task Force ^a	N=985 students	62
University of Illinois at Chicago ⁷⁷	In 2011, smoking was prohibited 25-ft from building entrances; Enrollment=27 580	The Student Government placed the smoke-free policy on a voting ballot that was open to all students	N=10 354 students	69
University of Mississippi ⁷⁸	In 2011, smoking was prohibited 25-ft from building entrances; Enrollment=13 951	The Department of Health Promotion conducted the survey on the university's Web site, which was open to all students	N=650 students	76
University of New Mexico ⁷⁹	In 2007, smoking was prohibited except for designated smoking areas; Enrollment=32 086	The Coalition for a UNM Smoke-Free Campus conducted the survey ^a	N=154 students	52

Table 2. (Continued)

UNIVERSITY	POLICY AND ENROLLMENT DURING TIME OF SURVEY	SURVEY METHODS	N	APPROVAL, %
University of New Mexico ⁷⁹	In 2006, smoking was prohibited except for designated smoking areas; Enrollment=32 347	The Student Government conducted the survey ^a	N=663 students	54
University of North Florida ⁸⁰	In 2011, smoking was prohibited 25-ft from buildings; Enrollment=16 368	The university's Safety Council conducted the survey ^a	N=4097 students, faculty, and staff	67.8
University of North Texas ⁸¹	In 2012, smoking was prohibited except for designated smoking areas; Enrollment=35 778	The university's Relations Communication and Marketing department conducted the survey ^a	N=835 students, faculty, and staff	74
University of Oregon ⁸²	In 2010, smoking was prohibited 10-ft from building entrances; Enrollment=21 135	The university's Smoke-Free Task Force sent the survey to a random sample of students	N=837 students	75
University of Southern Mississippi ⁸³	In 2015, smoking was prohibited except for designated smoking areas; Enrollment=12 068	The Student Government opened a referendum on a smoke-free policy in addition to the annual Student Government election ballot	N=1500 students	76
Washington State University—Vancouver ⁸⁴	In 2012, smoking was prohibited 25-ft from building entrances; Enrollment=2980	The Campus Smoking Committee conducted the survey ^a	N=>1000 students	70
West Virginia University ⁸⁵	In 2009, smoking was prohibited inside buildings, but permitted anywhere on university grounds; Enrollment=31 952	The Tobacco-Free Mountaineers gave out surveys outside of classrooms and the student recreation center, which was after the Student Government voted in favor of a smoke-free policy and was sent to the university's President for review	N=500 students	68

^aNonspecified survey methods.

newspaper articles would have been located, especially because there are more than 1000 smoke-free colleges and universities in the United States.¹⁵ Perhaps more advocates of campus tobacco policies should consider using their campus newspapers to publicize survey findings. Second, advocates who desire to publish survey results via campus newspapers should work with reporters to when reporting the statistics to help paint a better picture of overall approval, how the surveys were conducted, and by whom.

The results from this study provide several opportunities for future research. First, previous studies indicate that certain disparities exist among demographics regarding support of tobacco policies, such as sex, race, and smoking status.^{20,22,25,29} University administrators and/or students conducting polls should consider including various demographics to tease apart approval from various groups of people on campus. Second, researchers should also consider studying how campus approval of tobacco policies is framed by campus newspapers, such as from a public health issue or a civil liberties issue. For example, several newspapers included quotes from students regarding their view of personal rights, such as “This is a public university under the domain of being an open public space. People should be able to exercise their rights that they have in the public space

- smoking included.”⁴⁴ Other articles were framed from a public health perspective by emphasizing faculty and student quotes regarding the harms of tobacco. Third, the findings from this study suggest that campus newspapers can serve as an easily accessible, and searchable, nontraditional source of data for a variety of research topics. Although campus newspapers clearly do not have any advantage over traditional data sources in terms of validity, researchers may want to consider examining additional qualitative and quantitative information that might be available in campus newspapers.

This study had several limitations. First, it is important to emphasize the difference in methodologic rigor between surveys found in the peer-reviewed literature and in campus newspapers. Because university newspapers are not peer-reviewed, it should not be assumed that the surveys included in this study were of high-quality research design or accurate. Second, the search terms used to select potentially relevant newspaper articles, although identical across each institution, may not have retrieved all articles of campus surveys regarding tobacco control policies. Third, the analysis focuses on only a small number of campuses in the United States that were not selected randomly. Moreover, the campuses were only 4-year, public universities. As such, the study's results cannot be generalized to

institutions in other countries, 2-year institutions, private institutions, or even public universities. Finally, the articles tended to publish only the percent of campus approval, without noting the percent of people who held neutral or disapproving opinions. That information could have been helpful in judging against the percentages of approval.

Conclusions

The university campus is an educational environment as well as a workplace, where students, faculty, and staff spend many hours per day. In these functions, the campus is an important environment for protecting the health of students and employees and for role modeling of good health behavior. The results of this analysis of campus newspapers suggests that among those surveyed and among those who voted regarding policy change, with a few exceptions, there was attitudinal support in most of the students and employees for both tobacco-free and smoke-free policies.

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Author Contributions

CMS conceived and designed the experiments. CMS and BAG analyzed the data. CMS, ZK, BAG, and MPD wrote the first draft of the manuscript; contributed to the writing of the manuscript; agree with manuscript results and conclusions; jointly developed the structure and arguments for the paper; and made critical revisions and approved final version. All authors reviewed and approved the final manuscript.

Disclosures and Ethics

As a requirement of publication, authors have provided to the publisher signed confirmation of compliance with legal and ethical obligations including but not limited to the following: authorship and contributorship, conflicts of interest, privacy and confidentiality, and (where applicable) protection of human and animal research subjects. The authors have read and confirmed their agreement with the ICMJE authorship and conflict of interest criteria. The authors have also confirmed that this article is unique and not under consideration or published in any other publication, and that they have permission from rights holders to reproduce any copyrighted material. The external blind peer reviewers report no conflicts of interest.

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