

A Report on Tobacco Control: A Survey on Tobacco Use and Control among College Students in Tennessee

Suggested citation

He Y, Mamudu HM, Veeranki SP. 2012. *A Report on Tobacco Control: A Survey on Tobacco Use and Control among College Students in Tennessee*. Tobacco Policy Research Program. Johnson City, TN: East Tennessee State University

TOBACCO POLICY RESEARCH PROGRAM

Department of Health Services Management and Policy

College of Public Health

East Tennessee States University

INTRODUCTION

Tobacco use among young adults aged 18-24 years is a growing public health concern. Nearly one third of young adults attend college, making higher educational institutions important venues for students to establish their own behaviors. For this reason, it is important for colleges and universities to provide opportunities for preventing tobacco use. Implementation of tobacco-free campus policies has been encouraged by several organizations, including American College Health Association. In fact, central to *Healthy People 2020* is the creation of tobacco-free campuses across the country. Previous researches show such policies are significantly effective for preventing the initiation and use of tobacco as well as promoting cessation.

East Tennessee State University (ETSU) is located in northeastern part of Tennessee, the third largest tobacco producing state in the U.S. In August 2008, ETSU implemented a 100% tobacco-free campus policy (PPP-53) to provide a healthy, sanitary environment free from tobacco smoke and tobacco-related debris. Three years have passed since the implementation of the policy, but students' opinion about it is unknown. As a result, a student survey project was launched in April 2011 to assess tobacco use among the students, analyze their attitudes and behaviors toward the policy and determine the potential gaps in implementation and enforcement of the policy.

METHODS

The student survey project was similar to the employee project in the respect of project planning and process. We developed survey instrument from January through March 2011. The instrument was developed based on the Global Tobacco Surveillance System Collaborative Group, consisting of the World Health Organization (WHO) and the U.S. Centers for Disease Control and Prevention and other collaborators Association.

The instruments contained following sections:

- A. Demographics Information
- B. Tobacco Use Behavior
- C. Tobacco Use and Familial Relations
- D. Knowledge about the Health Effects of Tobacco Use
- E. Exposure to Secondhand Smoke
- F. Tobacco Use Cessation
- G. Tobacco Industry Marketing and Promotion
- H. Tobacco-free campus environment
- I. Awareness of Smoke/Tobacco-Free Policy(s)
- J. Attitudes toward Smoke/Tobacco-Free Policy(s)
- K. Compliance with School Smoke/Tobacco-Free Policy
- L. Impact of School Smoke/Tobacco-Free Policy
- M. Enforcement of School Smoke/Tobacco-Free Policy
- N. 100% Tobacco-Free Policy on School Campus
- O. Religiosity and Tobacco Use
- P. Partisanship and Political Ideology
- Q. Suggestions/Recommendations

In March 2011, the student study was submitted to IRB and was approved on March 30. In April 2011, the survey instrument was uploaded into Survey System, which was administered via College of Medicine. One week before activating the survey, we posted more than 100 flyers throughout all campuses. Additionally, miniature copies of the flyer were placed in main cafeteria through the end. Furthermore, thanks to the help from President Office, The survey link was advertised on the homepage of ETSU website (www.etsu.edu).

In April 18th, the survey was activated and through May 30th. It is an anonymous survey; we did not track any respondent's information, however, respondent needed to verify if they are current ETSU student. One reminder email was sent to all students after 14 days of survey activation on May 2nd; aim to increase the response rate for the study.

After the deactivation of the survey, dataset was downloaded from Survey System, and cleaned using Statistical Analysis System 9.2 (SAS). Descriptive statistics (frequency and percentages) were performed using SAS.

RESULTS

Demographics

There were total 15,234 students enrolled into ETSU during 2010-2011 academic years. We cleaned the original data for non-responses; a sample size of 1440 was used for the analysis. Table 1 shows the demographic characteristics of the survey respondents. A greater proportion of respondents were female (56.3%), Caucasians (85%), aged between 20 to 21 (25.6%), seniors (32.2%) and affiliated with the College of Arts and Sciences.

Tobacco Use Behavior

Tobacco use prevalence among ETSU students is surprisingly high. Table 2 details the tobacco use figures among students. About 91.7% of respondents had smoked cigarettes before and 48.1% currently smoke. Also, 29.9% of respondents currently use chewing tobacco products, and 27.5% of respondents are using cigar. The current smoking rate (48.1%) is significantly higher than the state average (Figure 1).

Among current smokers, 54.7% were females and 45.3% were males.

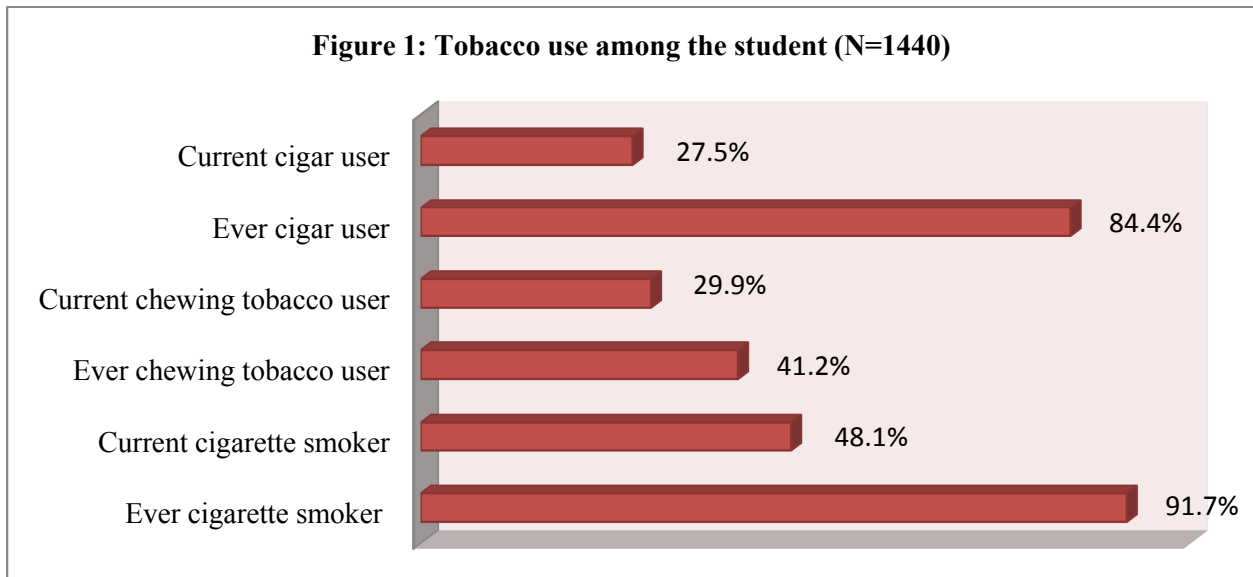


Table 1 Characteristics of the survey respondents (n=1,440)

Characteristics	Number of respondents (n)	Percentage of respondents (%)
<i>Age</i>		
Less than 18 years	3	0.2
18 - 19 Years	150	10.4
20 - 21 Years	369	25.6
22 - 23 Years	272	18.9
24 - 25 Years	144	10.0
26 –27 Years	79	5.5
28 –29 Years	72	5.0
30 years and above	279	19.4
Missing response	72	5.0
<i>Gender</i>		
Female	810	56.3
Male	571	39.7
Missing response	59	4.1
<i>Race</i>		
Caucasians	1224	85.0
Non-Caucasians	142	9.9
Missing response	74	5.1
<i>Years in school</i>		
Freshman	93	6.5
Sophomore	210	14.6
Junior	323	22.4
Senior	464	32.2
Graduate	293	20.3
Missing response	57	4.0
<i>School Affiliation</i>		
College of Arts and Sciences	550	38.2
College of Business and Technology	296	20.6
College of Clinical and Rehabilitative Health Sciences	57	4.0
College of Education	173	12.0
College of Medicine	28	1.9
College of Nursing	99	6.9
College of Pharmacy	18	1.3
College of Public Health	98	6.8
School of Continuing Studies and Academic Outreach	21	1.5
Missing response	100	6.9

Table 2: Characteristics of survey participants (n=1,440)

Characteristics	Current smoker		Ever smoker	
	Yes (n %)	No (n %)	Yes (n %)	No (n %)
Age				
Less than 18 years	0.0%	0.3%	0.0%	0.5%
18 - 19 Years	11.7%	10.7%	8.7%	13.5%
20 - 21 Years	27.5%	26.8%	25.3%	28.8%
22 - 23 Years	18.6%	20.3%	16.9%	23.2%
24 - 25 Years	9.9%	10.7%	12.2%	8.7%
26 –27 Years	5.1%	6.0%	6.6%	4.9%
28 –29 Years	7.2%	4.6%	6.4%	4.0%
30 years and above	20.1%	20.5%	24.0%	16.4%
Gender				
Female	54.7%	59.9%	53.0%	64.8%
Male	45.3%	40.1%	47.0%	35.2%
Race				
Caucasians	92.2%	88.8%	92.6%	86.3%
Non-Caucasians	7.8%	11.2%	7.4%	13.7%
Years in school				
Freshman	4.7%	7.4%	5.5%	8.0%
Sophomore	20.9%	13.3%	16.3%	14.0%
Junior	27.4%	22.0%	24.2%	22.5%
Senior	34.2%	33.3%	32.9%	34.3%
Graduate	12.7%	23.9%	21.1%	21.2%
School Affiliation				
College of Arts and Sciences	51.1%	37.9%	42.3%	39.5%
College of Business and Technology	25.2%	21.1%	25.5%	18.4%
College of Clinical and Rehabilitative Health Sciences	2.8%	4.7%	3.6%	5.0%
College of Education	8.4%	14.3%	11.3%	14.7%
College of Medicine	0.6%	2.6%	2.1%	2.2%
College of Nursing	4.0%	8.4%	5.7%	9.2%
College of Pharmacy	0.3%	1.7%	1.0%	1.7%
College of Public Health	5.6%	7.9%	6.4%	8.3%
School of Continuing Studies and Academic Outreach	1.9%	1.5%	1.9%	1.2%

Attitude toward the ETSU Tobacco-Free Policy

The support for the policy is presented in the following Figures.

Around 64.3% of respondents favored the tobacco-free policy.

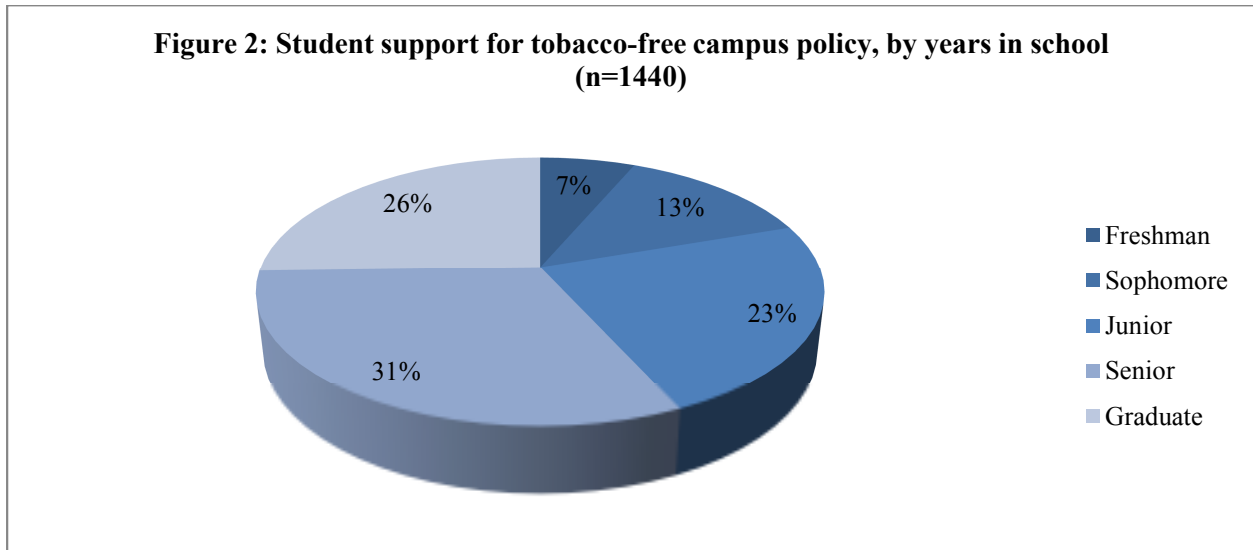
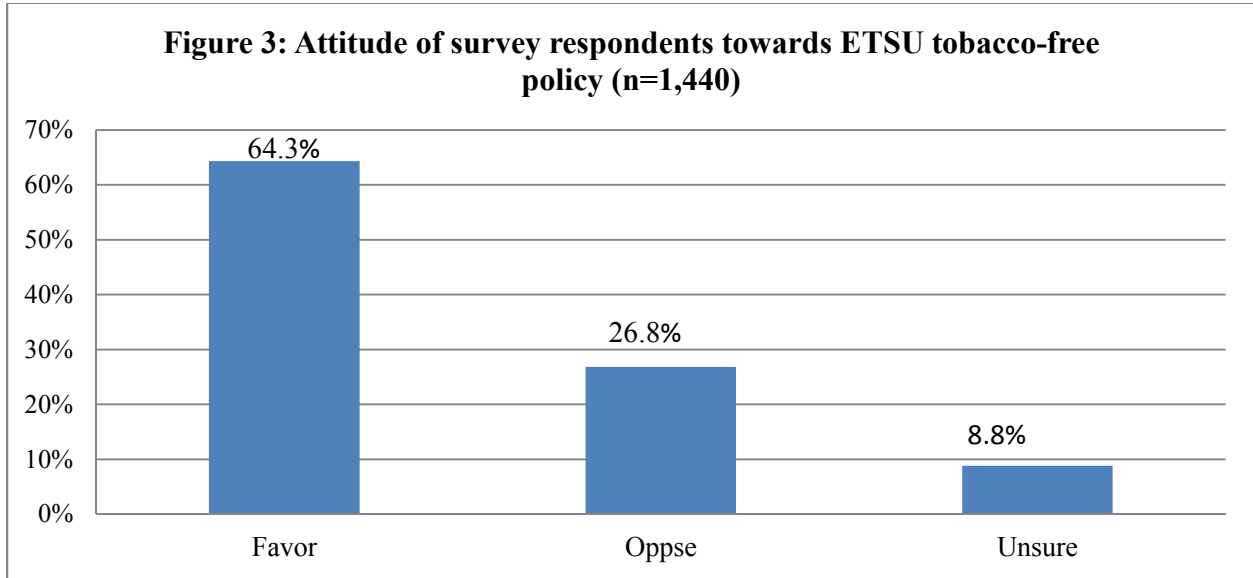


Table 3: Support for Tobacco-Free Policy by age

		Attitude toward ETSU Policy			Total
		Unsure	Oppose	Favor	
Age	Less than 18 years	0 .0%	1 50.0%	1 50.0%	2 100.0%
	18 - 19 Years	17 13.1%	32 24.6%	81 62.3%	130 100.0%
	20 - 21 Years	31 9.6%	82 25.5%	209 64.9%	322 100.0%
	22 - 23 Years	15 6.1%	68 27.8%	162 66.1%	245 100.0%
	24 - 25 Years	9 7.0%	35 27.3%	84 65.6%	128 100.0%
	26 -27 Years	8 11.4%	22 31.4%	40 57.1%	70 100.0%
	28 -29 Years	5 7.6%	21 31.8%	40 60.6%	66 100.0%
	30 years and above	22 8.6%	66 25.7%	169 65.8%	257 100.0%
	Total	107 8.8%	327 26.8%	786 64.4%	1220 100.0%

Table 4: Support for Tobacco-Free Policy by gender

		Attitude toward ETSU Policy			Total
		Unsure	Oppose	Favor	
Gender	Female	61 8.3%	155 21.1%	519 70.6%	735 100.0%
	Male	48 9.7%	174 35.3%	271 55.0%	493 100.0%
Total		109 8.9%	329 26.8%	790 64.3%	1228 100.0%

Table 5: Support for Tobacco-Free Policy by race

		Attitude toward ETSU Policy			Total
		Unsure	Oppose	Favor	
Race	Non-Caucasians	9 7.4%	19 15.6%	94 77.0%	122 100.0%
	Caucasians	98 8.9%	304 27.8%	693 63.3%	1095 100.0%
Total		107 8.8%	323 26.5%	787 64.7%	1217 100.0%

Table 6: Support for Tobacco-Free Policy by Years in School

		Attitude toward ETSU Policy			Total
		Unsure	Oppose	Favor	
Years In School	Freshman	10 12.3%	20 24.7%	51 63.0%	81 100.0%
	Sophomore	20 10.9%	58 31.7%	105 57.4%	183 100.0%
	Junior	23 8.0%	80 27.8%	185 64.2%	288 100.0%
	Senior	34 8.3%	126 30.9%	248 60.8%	408 100.0%
	Graduate	22 8.1%	47 17.4%	201 74.4%	270 100.0%
Total		109 8.9%	331 26.9%	790 64.2%	1230 100.0%

Table 7: Support for Tobacco-Free Policy by School Affiliation

		Attitude toward ETSU Policy			Total
		Unsure	Oppose	Favor	
School Affiliation	College of Arts and Sciences	43 9.0%	159 33.1%	278 57.9%	480 100.0%
	College of Business and Technology	19 7.1%	92 34.5%	156 58.4%	267 100.0%
	College of Clinical and Rehabilitative Health Sciences	8 15.7%	5 9.8%	38 74.5%	51 100.0%
	College of Education	19 12.0%	31 19.6%	108 68.4%	158 100.0%
	College of Medicine	1 3.8%	1 3.8%	24 92.3%	26 100.0%
	College of Nursing	10 11.0%	10 11.0%	71 78.0%	91 100.0%
	College of Pharmacy	0 .0%	2 13.3%	13 86.7%	15 100.0%
	College of Public Health	3 3.2%	9 9.6%	82 87.2%	94 100.0%
	School of Continuing Studies and Academic Outreach	2 9.5%	9 42.9%	10 47.6%	21 100.0%
Total		105 8.7%	318 26.4%	780 64.8%	1203 100.0%

Based on findings from multivariate analysis, strong likelihood of support for the tobacco-free policy was associated with being female, Non-Caucasians, and belong to College of Arts and Sciences, College of Business and Technology, College of Education, and School of Continuing Studies and Academic Outreach.

Perceptions about of the ETSU Tobacco-Free policy

Respondents were asked to indicate what they think about the policy, and 54.6% mentioned that the policy has reduced or will reduce smoking on campus. 66.1% of respondents thought the policy will reduce the exposure of people to cigarettes smoke from others on campus. 56.3% thought the policy will improve the health of students. 66% thought the policy will make ETSU premises/property cleaner. However, less than half (48.4%) respondents thought the policy will increase their preference for smoke-free environments.

Compliance and Enforcement

Although about two-thirds of respondents favored the policy, one out of three (33.4%) indicate that they smoked cigarettes on ETSU premises/property. While being asked if noticed anyone was smoking on ETSU premises/property, approximately 94.5% of them noticed others smoking cigarettes on campus (reporting others). Among those who indicated they were current smoker, nearly 80% of them (213 out of 276) smoked cigarettes on university property in the past year. This is a major issue regarding the policy compliance (Table 8).

66% of respondents thought the reason why people smokes on campus is because they observed others smoking, while 77.7% thought that was due to weak enforcement in the policy context. Additionally, 50.9% of respondents thought there were adequate tobacco-free signs on campus, while 88.6% of them thought smokers just ignored the policy.

Overall only 52.7% of them were satisfied with the current ETSU tobacco-free policy. Respondents were unsatisfied on how ETSU raises awareness about the current policy (48.3%), the implementation of the policy (60.5%), and the enforcement of the policy (68.5%).

Table 8: Student support for enforcement mechanism of tobacco-free policies proposed for college campuses

	All students	Current smokers
Compliance with the tobacco-free policy should be voluntary	29.2%	68.4%
ETSU should warn students who smoke outside their private cars	67.0%	31.3%
ETSU should cite students who smoke outside their private cars	61.9%	17.4%
ETSU should fine students who smoke outside their private cars	56.7%	14.0%
ETSU should penalize students who smoke outside their private cars	54.6%	13.2%
ETSU should sanction students who repeatedly smoke outside their private cars	53.5%	16.5%
ETSU should not do anything to students who smoke outside their private cars	27.0%	68.3%
ETSU should allow students to play a major role in enforcing the tobacco-free policy	33.8%	26.5%
I am comfortable about asking someone who is smoking outside his/her private car to stop smoking	18.1%	14.1%
I am comfortable about reporting someone who is smoking outside his/her private car to stop smoking	28.3%	9.1%
ETSU should devote more resources to monitoring compliance and enforcement of the tobacco-free policy	57.4%	17.4%
ETSU should have a toll-free number for reporting violation of the policy	50.2%	14.7%

Table 9: Student support for 100% tobacco-free policies proposed for college campuses

	All students	Current smoker
The policy should target students, employees, and visitors/contractors/patrons	73.7%	30.9%
The policy should include school campus, property, and grounds	71.1%	25.7%
The policy should include all ETSU/state owned vehicles and all vehicles on institution property	62.9%	31.3%
The policy should be in effect at all school-sponsored events and meetings on and off campus	55.2%	21.8%
The policy should be in effect 24 hours a day/365 days a year	68.2%	24.9%
The policy should prohibit tobacco industry advertising on campus	78.0%	57.7%
The policy should require designated individual to enforce written and disciplinary consequences of policy violation	63.1%	22.5%
The policy should require specific consequences according to grade level, number of offenses, and communication to parents/guardians about offenses	54.8%	18.5%
The policy should require cessation and/or education for offenses for students and employees , not just punitive measures	54.8%	20.1%
The policy should require specific consequences identified for policy violation by visitors/contractors/patrons	62.3%	21.6%
The policy should require cross-curricular age-appropriate educational opportunities about tobacco use and prevention	63.6%	38.1%
The policy should require ETSU to offer tobacco use cessation programs for students and staff	69.6%	53.1%
The policy should require a rationale addressing the health and environmental consequences of tobacco products	74.1%	49.8%
The policy should require a definition of any and all tobacco products	77.7%	52.5%
The policy should require that the written tobacco policy should be distributed to everyone on campus	67.9%	39.6%
The distribution of policy should go through student and staff handbooks, parent newsletters, and announcements at school events	75.7%	47.6%
The distribution of policy should be with signage prohibiting use of all tobacco products on campus	70.7%	36.3%
The policy should require an applicable enforcement date	72.6%	38.0%
The policy should require an identified individual to review and keep the policy current	70.2%	39.0%
The policy requires referencing to any additional support documents	64.9%	39.6%

DISCUSSION AND CONCLUSION

The study provides a way to understand an effective tobacco-free policy for college and university campuses. As Table 9 shows, 100% tobacco-free is generally supported by about a third of students in ETSU. Tobacco-free campus is important for health as it protects nonsmokers, motivates people to quit or reduce smoking, and creates social norms of nonsmoking. Thus, this study does not only highlight the importance of tobacco-free campus policies in Tennessee and elsewhere but also assists college administrators and the public health community to identify gaps in implementation and enforcement of such policies. Moreover, it promotes development of strong and comprehensive tobacco-free policies with high compliance rates in all higher educational institutions.

TOBACCO POLICY RESEARCH PROGRAM

EAST TENNESSEE STATE UNIVERSITY

Hadii M. Mamudu, PhD, MPA

Assistant Professor of Public Health
Department of Health Services Management and Policy
Tel: +1 423 439 4484
Email: mamudu@etsu.edu

Sreenivas Phani Veeranki, MD, MPH

Doctoral Candidate
Department of Biostatistics and Epidemiology
Tel: +1 412 378 3936
Email: veeranki@goldmail.etsu.edu

Yi He, MPH

DrPH Student
Department of Biostatistics and Epidemiology
Tel: +1 423 737 0670
Email: hey001@etsu.edu

Yang Chen, MS

MPH Student
Department of Biostatistics and Epidemiology
Email: chen2@goldmail.etsu.edu

Rafie Boghozian-Khoygani, MBA

Lecturer
Department of Economics and Finance
Tel: +1 423-439-4202
Email: khoygani@etsu.edu

For more information or questions, please contact:

Hadii M. Mamudu, PhD, MPA

Assistant Professor of Public Health
Department of Health Services Management and Policy
East Tennessee State University
Tel: +1 423 439 4484
Email: mamudu@etsu.edu