



Lessons Learned from Tobacco-Free Campuses:

evidence from

Georgia Regents University
&
University of South Carolina

Session Presentations

- ▶ **Our Tobacco-Free Campus Policy: Pre-Policy Engagement and Lessons Learned**
 - ▶ **Jessica Johnston**, MPH; Director of Healthy Carolina
 - ▶ University of South Carolina
- ▶ **GRU Tobacco-Free Campus: Structure, Function, Lessons Learned**
 - ▶ **Christine O'Meara**, MA, MPH; Director, Cancer Information & Awareness
 - ▶ Georgia Regents University
- ▶ **Support for Tobacco-Free Campus Policies among Students, Faculty and Staff: Evidence from South Carolina**
 - ▶ **Vahé Heboyan**, PhD; Assistant Professor, Georgia Regents University
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Support for Tobacco-Free Campus Policies among Students, Faculty and Staff: Evidence from South Carolina

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Introduction | smoking facts

- ▶ Tobacco is the **leading cause** of preventable and premature **death** in US.
- ▶ **443,000 people die** annually due to tobacco use.
- ▶ Annually **costs over \$210 billion** in direct medical costs and lost productivity.
- ▶ **Smoking causes more deaths** each year than all of these combined[2]:
 - ▶ AIDS/HIV
 - ▶ Heroin, Cocaine use
 - ▶ Alcohol use
 - ▶ Motor vehicle injuries
 - ▶ Firearm-related incidents

Introduction | smoking facts

- ▶ Over 3,800 young people under 18 years of age smoke their first cigarette every day and over 1,000 become daily smokers.
 - ▶ *Vast majority of these young Americans will become addicted to nicotine by young adulthood.*
- ▶ 40% of young adults 18-24 years of age attended college in 2013.
 - ▶ exposed to peer-smoking, secondhand smoke, and tobacco industry promotions
- ▶ 90% smokers started smoking by age 18
- ▶ 99% started by age 26
- ▶ These are important health behaviors that if established during adolescence and early adulthood can become lifetime patterns and potentially affect long-term health.
- ▶ Campus tobacco-free policies offers unique opportunities for promoting social norms supporting healthy lifestyles and prevent tobacco use among a large number of young adults.

Objective

- ▶ Discuss the **strategic importance** of pre-assessment to support adopting tobacco-free policies
- ▶ Describe lessons learned from the assessment
- ▶ Show results from three campuses in SC

Strategic importance

- ▶ Strategic resources for the leadership to engage the campus community
 - ▶ Town-hall meetings
 - ▶ Student associations
 - ▶ Speakers who share own-life experiences, etc.
 - ▶ **pre-Policy assessment**
- ▶ **pre-Policy Assessment**
 - ▶ Provides support to University/College leadership to make a 'better' or 'more effective' case for tobacco-free policy
 - ▶ Shows the attitude of the community the policy will affect
 - ▶ Students, faculty, and staff

Components of survey

- ▶ Tobacco use
- ▶ Quitting behavior
- ▶ Beliefs about smoking and quitting
- ▶ Social norming
- ▶ Support for proposed tobacco-free campus policy
- ▶ Support for proposed smoke-free campus policy*
- ▶ Socio-economic and demographic factors.

** if response if negative for tobacco-free*

Strategies for higher engagement

▶ **On-campus promotion**

- ▶ administration
- ▶ faculty
- ▶ student organizations

- ▶ e-mail
- ▶ website presence
- ▶ flyers
- ▶ presentations at campus events
- ▶ etc.

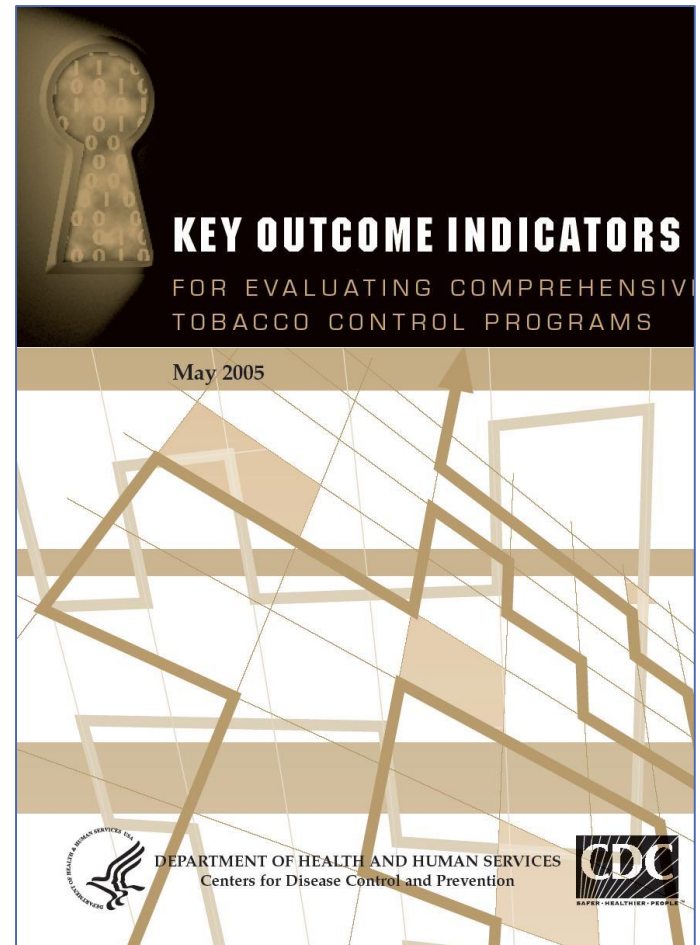
▶ **Incentives**

Strategies for higher engagement

Campus	Total pop.	Response		Level of promotion
		count	percent	
A	3,971	1,287	32.4 %	Some gift cards, very high level of involvement by admin and student organizations to promote the survey in advance
B	956	211	22.1 %	Some gift cards, moderate administrative encouragement
C	552	128	23.2 %	Some gift cards, some faculty/admin encouragement
Total	5,479	1,626	29.7 %	

Method

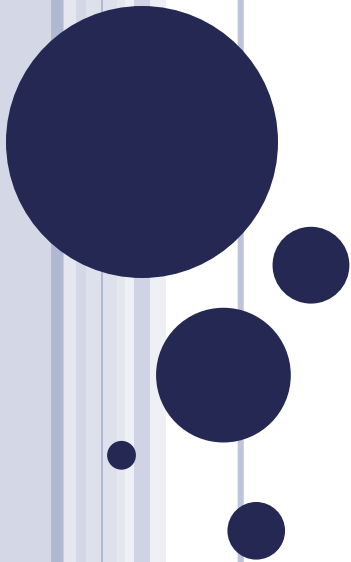
- ▶ Online survey
 - ▶ Quantitative
 - ▶ Qualitative
- ▶ Validated questions
- ▶ Survey link
 - ▶ Individual - using email address
 - ▶ Generic
- ▶ Extensive data quality checks built-in
- ▶ Automated logic-guidance
- ▶ Data-input restrictions



Survey Content

- ▶ Screening questions
- ▶ Tobacco use
- ▶ Cigarette use
- ▶ Other tobacco use
- ▶ Quit attempts
- ▶ Future quit attempts
- ▶ Media questions
- ▶ Beliefs about tobacco use and quitting
- ▶ **Attitudes and perceptions towards policy change**
- ▶ Physical activity and nutrition
- ▶ Demographics

Evidence from three universities in SC



Objectives

- ▶ **Primary objective:** Conduct a pre-assessment of attitudes and perceptions of students, faculty, and staff about proposed tobacco-free policy
- ▶ **Secondary objectives:**
 - ▶ develop understanding of tobacco use prevalence, social norms, quitting behavior, etc.
 - ▶ identify socio-economic, demographic, and behavioral characteristics of individuals that predict support for tobacco-free policies.

Data

- ▶ Data are collected during 2013 from three public universities in SC.
 - ▶ We will refer them as A, B, C
- ▶ Students, faculty, and staff completed an online questionnaire measuring:
 - ▶ tobacco use
 - ▶ quitting behavior
 - ▶ beliefs about smoking and quitting
 - ▶ social norming
 - ▶ socio-economic and demographic factors
 - ▶ support for tobacco-free policy
 - ▶ *support for smoke-free policy (if no to tobacco-free)*
 - ▶ *enforcement*

Primary questions

48. **100% Tobacco-Free** is defined as where the use of all tobacco products is prohibited on any school property (owned or leased, including vehicles) at any time by anyone. This includes: cigarettes, cigars, e-cigarettes, hookah, chewing tobacco, snuff, and snus.

Would you support or oppose [*name of institution*] changing the current tobacco/smoking policy of **all indoor and outdoor campus locations to 100% Tobacco-Free** ?

- 48.1. Strongly support → Go To Question 51 (*policy enforcement*)
- 48.2. Support → Go To Question 51 (*policy enforcement*)
- 48.3. Oppose
- 48.4. Strongly oppose

49. [if Q48.3 or 48.4 above is selected (*opposing 100% Tobacco-Free policy*), then ask...]

100% Smoke-Free is defined as where no smoking is allowed on any school property (owned or leased, including vehicles) at any time by anyone.

Would you support or oppose [*name of institution*] changing the current tobacco/smoking policy of **all indoor and outdoor campus locations to 100% Smoke-Free** ?

- 49.1. Strongly support
- 49.2. Support
- 49.3. Oppose
- 49.4. Strongly oppose

Response rate

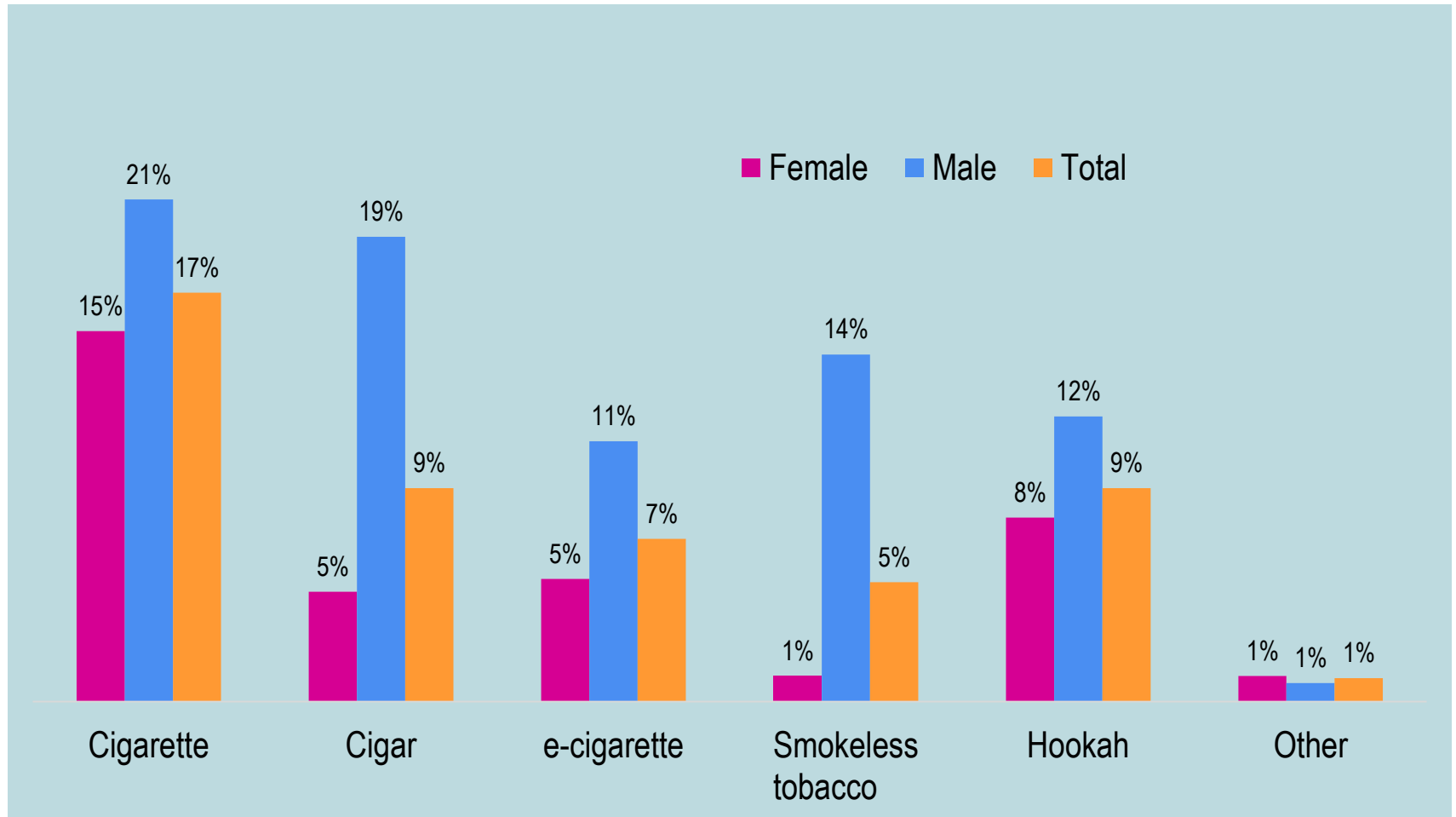
Campus	Target Population			Completed	
	students	faculty and staff	total	count	percent
A	3,392	579	3,971	1,287	32.4 %
B	863	93	956	211	22.1 %
C	517	35	552	128	23.2 %
Total	4,772	707	5,479	1,626	29.7 %

Results – prevalence

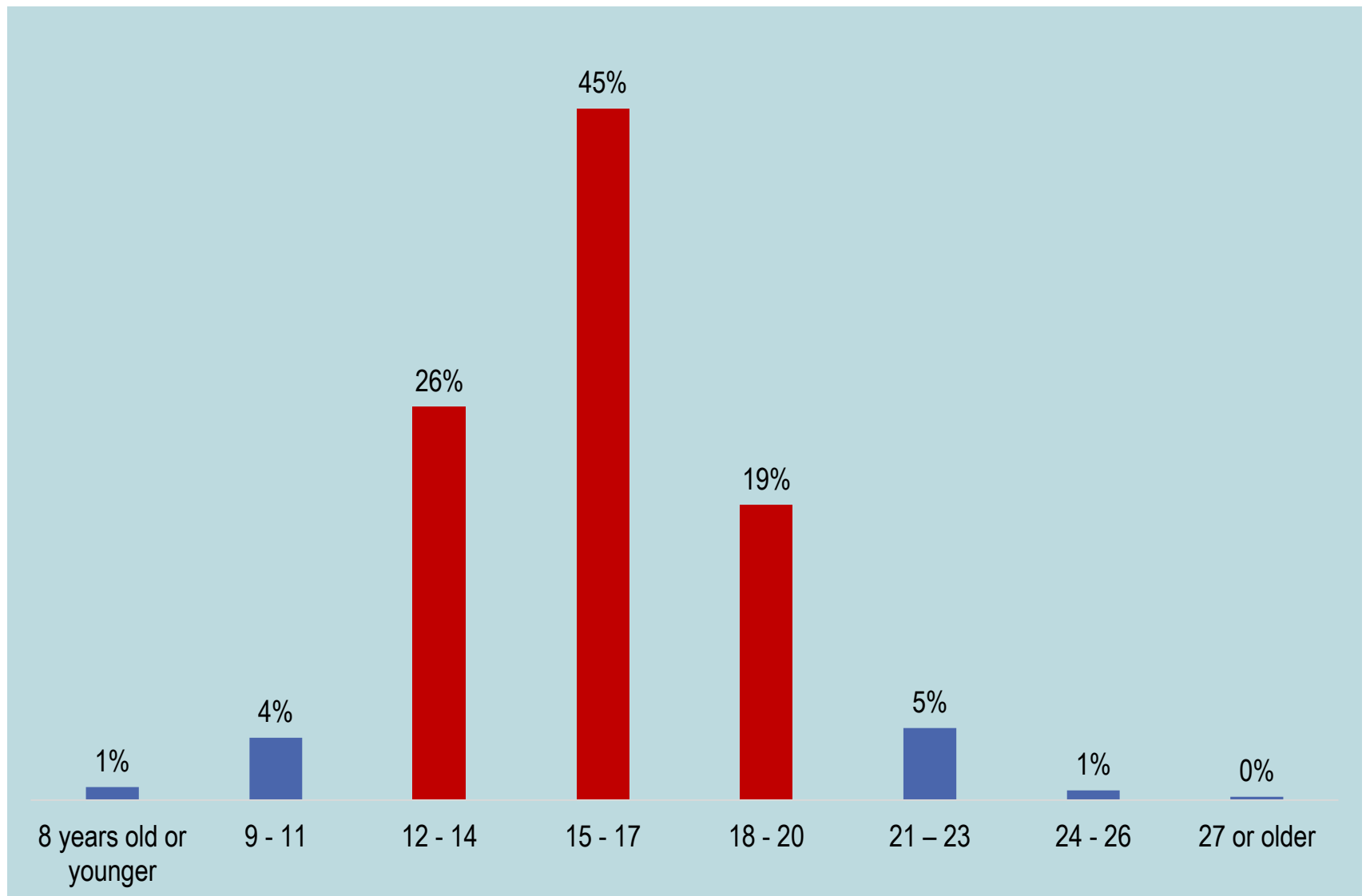
Tobacco Products	A	B	C
Cigarettes			
Students	17 %	18 %	19 %
Faculty	7 %	4 %	0 %
Staff	6 %	8 %	8 %
Cigars			
Students	10 %	5 %	7 %
Faculty	2 %	0 %	0 %
Staff	0 %	2 %	4 %
e-Cigarettes			
Students	7 %	7 %	4 %
Faculty	2 %	4 %	0 %
Staff	1 %	0 %	0 %
Hookah / Waterpipe			
Students	11 %	4 %	1 %
Faculty	1 %	4 %	0 %
Staff	3 %	0 %	0 %
Smokeless tobacco			
Students	5 %	6 %	1 %
Faculty	3 %	0 %	0 %
Staff	3 %	4 %	4 %

Current use of tobacco among students ... (n=1,336)

prevalence of cigarette use in SC among adults and youth: **23%**



Smoking Initiation (n=470)



Results – policy support

▶ Tobacco-free policy

	A	B	C	All
Strongly support	39 %	43 %	30 %	39 %
Support	24 %	32 %	32 %	26 %
Oppose	16 %	15 %	23 %	16 %
Strongly oppose	20 %	10 %	16 %	19 %

Results – tobacco-free policy support

Campus		Faculty	Staff	Student	All
A	Support	72 %	78 %	60 %	64 %
	Oppose	28 %	22 %	40 %	36 %
B	Support	76 %	79 %	73 %	75 %
	Oppose	24 %	21 %	27 %	25 %
C	Support	88 %	72 %	57 %	62 %
	Oppose	13 %	28 %	43 %	38 %
All	Support	74 %	77 %	61 %	65 %
	Oppose	26 %	23 %	39 %	35 %

Results – Determinants of policy support

- ▶ **Question of Interest:** *Would you support or oppose [university] changing the current tobacco/smoking policy of all indoor and outdoor campus locations to 100% tobacco free ?*
- ▶ **Independent variables** control for socio-economic, demographic, and behavioral factors as well as tobacco use status.
- ▶ **Modeling approach:** A logit model is used to estimate the effects of regressors on the **probability of supporting or opposing** the tobacco-free policy on their campus.

Select results*

Less likely to support

- ▶ Current smokers were less likely to support
 - ▶ Cigarette smokers: OR=0.11
 - ▶ Other tobacco users: OR=0.39
- ▶ Stressed (per Whooley et al., 1997) (OR=0.37)
- ▶ Male compared to female (OR=0.69)

More likely to support

- ▶ University B has 2.4 times higher odds of supporting tobacco-free policy compared to University A.
- ▶ Nonsmokers are more attractive to you than smokers (OR=3.18)
- ▶ Inhaling smoke from someone else's cigarette can cause lung cancer (OR=2.94)
- ▶ Bothered by smoking on your campus (OR=21.46)
- ▶ Having a health insurance (OR=1.94)

* Statistically significant

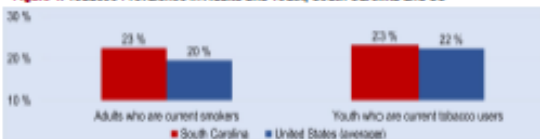
Introduction and Motivation

- Tobacco is the leading cause of preventable and premature death in US.
- 443,000 people die annually due to tobacco use.
- Annually costs over \$210 billion in direct medical costs and lost productivity.
- Over 3,800 young people under 18 years of age smoke their first cigarette every day and over 1,000 become daily smokers.
- Vast majority of these young Americans will become addicted to nicotine by young adulthood.
- 41% of young adults 18-24 years of age attended college in 2012 [2] and are exposed to peer-smoking, secondhand smoke, and are targeted with tobacco industry promotions.
- 19% of young adults initiate smoking at ages 18-24; almost no one initiates after age 25 [1].
- These are important health behaviors that if established during adolescence and early adulthood can become lifetime patterns and potentially affect long-term health.
- Adopting campus tobacco-free policies offers unique opportunities for promoting social norms supporting healthy lifestyles and prevent tobacco use among a large number of young adults.

Table 1. Tobacco Prevalence on Campuses and Support for Tobacco-Free Policy

Tobacco Products	Campus		
	Aiken	Salkahatchie	Union
Cigarettes			
Students	17%	15%	19%
Faculty	7%	4%	0%
Staff	6%	8%	8%
Cigars			
Students	10%	5%	7%
Faculty	2%	0%	0%
Staff	0%	2%	4%
e-Cigarettes			
Students	7%	7%	4%
Faculty	2%	4%	0%
Staff	1%	0%	0%
Hookah / Waterpipe			
Students	11%	4%	1%
Faculty	1%	4%	0%
Staff	3%	0%	0%
Smokeless tobacco (e.g. chewing tobacco or snuff, etc.)			
Students	5%	6%	1%
Faculty	3%	0%	0%
Staff	3%	4%	4%
Support for 100% Tobacco-free policy	64%	75%	62%

Figure 1. Tobacco Prevalence in Adults and Youth, South Carolina and US



Source: Adult rates are from BRFSS (2012); Youth rates are from YRBS (2012)

Table 2. Survey Response Rates

Campus	Target Population			Completed	
	students	faculty/staff	total	count	percent
Aiken	3,362	579	3,971	1,287	32.4%
Salkahatchie	863	93	958	211	22.1%
Union	517	35	552	128	23.2%
Total	4,772	707	5,479	1,626	29.7%

Objective

Identify socio-economic, demographic, and behavioral characteristics of individuals that predict support for tobacco-free policies among students, faculty and staff of select SC universities.

Policy Importance

To adopt policies and develop programs to reduce smoking on university campuses, it is critical to assess the personal, behavioral, and situational factors associated with support for tobacco control policies among students and campus personnel.

Data

- Cross-sectional data are collected during 2013 from three University of South Carolina system campuses (Aiken, Salkahatchie, Union) (Table 2).
- Students, faculty, and staff completed an online questionnaire measuring tobacco use, quitting behavior, and support for a tobacco-free campus policy as well as nutrition, physical activity, health status, social norms, and socio-economic and demographic factors.

Methods

- Question of Interest:** Would you support or oppose [university] changing the current tobacco/smoking policy of all indoor and outdoor campus locations to 100% tobacco free?
- Independent variables:** control for socio-economic, demographic, and behavioral factors as well as tobacco use status as described in Table 4.
- Modeling approach:** A logit model is used to estimate the effects of regressors on the probability of supporting or opposing the tobacco-free policy on their campus.

Table 3. Standardized Coefficient for Statistically Significant Estimates

Variable (x)	(A) β -standardized coefficient β_j/σ_{y_j}	(B) Fully standardized coefficient $(\sigma_y/\sigma_{y_j})\beta_j$
Campus (Salkahatchie)	0.278	0.089
Currently using tobacco other than cigarettes	-0.306	-0.114
Currently smoking cigarettes	-0.732	-0.257
Feeling down, depressed, or hopeless (1 = yes)	0.212	0.098
Agrees that: Nonsmokers are more attractive to you than smokers. Smoking cigarettes makes young people look cool or fit in. Inhaling smoke from someone else's cigarette can cause lung cancer.	0.375 0.178 0.349	0.152 0.040 0.103
Bothered by smoking on your campus	0.094	0.406
Stressed (1 = stressed per Whitley et al. (1997))	-0.319	-0.151
Reported fair or poor health (vs. excellent/very good health)	-0.325	-0.079
Health insurance (having = 1)	0.215	0.077
Male	-0.119	-0.056
Race is Black or African American (ref. = white)	0.132	0.054

(A) For a unit increase in x_j , y^* is expected to increase by β_j/σ_{y_j} standard deviations, ceteris paribus.
(B) For a standard deviation increase in x_j , y^* is expected to increase by $(\sigma_y/\sigma_{y_j})\beta_j$ standard deviations, ceteris paribus.

Contacts

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- Clinical Assistant Professor, Dept. of Health Promotion, Education, and Behavior, University of South Carolina, Columbia, SC.

Select References

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Table 4. Regression Results

Dependent Variable: support (Y) or oppose (N) tobacco-free policy	Odds R.	Std. Err.	z	p-value
Campus (ref. = USC Aiken)				
Salkahatchie	2.866	0.845	3.13	0.002
Union	0.905	0.295	-0.34	0.737
Role at the University (ref. = Faculty)				
Staff	1.180	0.405	0.48	0.630
Student	1.271	0.496	0.91	0.536
Class standing (ref. = Freshman)				
Sophomore	1.072	0.285	0.28	0.778
Junior	0.758	0.203	-0.86	0.375
Senior	0.724	0.194	-1.27	0.204
Graduate	1.017	0.546	0.03	0.975
Other	1.410	0.595	0.85	0.398
Currently using e-cigarettes	1.171	0.524	0.25	0.734
Currently using smokeless tobacco	1.078	0.483	0.17	0.884
Currently using tobacco other than cigarettes	0.390	0.106	-3.47	0.001
Currently smoking cigarettes	6.955	0.597	-3.53	0.000
Weakness of Smoking Index (ref = not addicted/not smoking)				
Low addiction	1.132	0.898	0.16	0.676
Moderate addiction	omitted			
High addiction	omitted			
Number of cigarettes smoked over the past 30 days (ref. = none)				
1-50 cigarettes	0.810	0.220	-1.37	0.171
51-100 cigarettes	1.861	1.282	0.9	0.367
101-200 cigarettes	0.265	0.294	-1.27	0.204
over 201 cigarettes	omitted			
Intention to quit smoking (1 = yes)	1.961	1.016	1.35	0.177
Feeling down, depressed, or hopeless (1 = yes)	1.825	0.805	1.94	0.086
Little interest or pleasure in doing things (1 = yes)	1.367	0.398	1.1	0.271
Agrees that:				
Nonsmokers are more attractive to you than smokers.	3.483	0.629	5.66	0.000
Smoking cigarettes makes young people look cool or fit in.	1.731	0.571	1.96	0.096
Someone who quits smoking will probably gain weight.	0.869	0.190	-0.01	0.983
Young people who smoke cigarettes have more friends.	0.754	0.253	-0.84	0.400
Breathing smoke from other people's cigarettes is harmful to health.	1.195	0.505	0.42	0.674
Inhaling smoke from someone else's cigarette can cause lung cancer.	2.806	1.005	3.15	0.002
Bothered by smoking on your campus	21.460	4.434	14.94	0.000
Fruit consumption (>= 1 if at least once a day)	1.950	0.211	0.45	0.650
Vegetable consumption (>= 1 if at least once a day)	0.707	0.147	-1.26	0.201
BM (ref. = normal)				
Overweight	0.829	0.161	-0.97	0.334
Obese	0.774	0.176	-1.13	0.285
Stressed (1 = stressed per Whitley et al. (1997))	0.874	0.191	-2.29	0.022
Health not fair (1 = fairer; diagnosed with cancer, cardiac and/or respiratory disease)	1.700	0.594	1.52	0.136
Health status (ref. = excellent/very good health)				
Good	1.073	0.190	0.4	0.602
Fair or poor	0.367	0.119	-3.08	0.002
Health insurance (having = 1)	1.838	0.415	3.09	0.002
Male (ref. female)	0.882	0.118	-2.15	0.032
Age (>= 1 if under 25 years of age)	0.868	0.171	-1.57	0.118
Race (ref. = white)				
Black	1.802	0.304	2.01	0.044
Asian/PI	1.885	0.892	0.96	0.324
Native American	0.896	0.806	-0.42	0.677
Mixed race	0.826	0.290	-1.01	0.313
Constant	0.115	0.092	-4.04	0.000

Discussion

- Results add to science literature on the determinants of Tobacco-free policy support among university students, faculty, and staff.
- Results explain factors that are associated with support or opposition to adopting tobacco-free policy at University campuses.
- Results provide better understanding of the profile of individuals who are likely to oppose adopting tobacco-free policy, hence, enabling University administration and policymakers to promote further dialogue.
- Results can be of importance to other colleges and universities or other educational institutions in the United States who plan to implement tobacco-free policy on their campuses.
- Results, even though representative of one state, can be assumed to be applicable to other states, especially in the South-east United States.

Conclusions

- ▶ pre-Policy Assessments are valuable strategic tools available to administrators and wellness coordinators to:
 - ▶ more effectively promote campus tobacco-free policy
 - ▶ ensure community representation in the process
- ▶ Assessments need to be planned and executed strategically to ensure high responsiveness of the community
- ▶ We can provide Assessment Support to Universities/Colleges planning tobacco-free policies
 - ▶ Assessment development and implementation
 - ▶ Data reports and detailed analysis

Acknowledgements



Support for Tobacco-Free Campus Policies among Students,
Faculty and Staff: Evidence from South Carolina



Thank you!

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