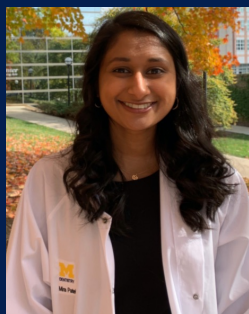




Tobacco Use Related Educational Experiences and Professional Behavior:
Do Dental and Dental Hygiene Students' Experiences with Tobacco Use
in Their Families and among Friends Matter?

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ABSTRACT

AIMS

RESULTS

Background: There is substantial evidence that tobacco use has detrimental effects on users' health and oral health. The objectives were (a) to assess the percentages of dental and dental hygiene students who had family members and friends who used tobacco and who used tobacco themselves and (b) to investigate whether growing up with family members and friends who used vs. did not use affected the students' responses to tobacco-related education and their professional behavior related to educating patients about this topic.

Methods: 210 dental students and 30 dental hygiene students responded to an anonymous survey.

Results: 54% had family members who used tobacco while they grew up and 30% had family members who were current users; 9.6% had friends in middle school, 43.8% in high school, 64.4% in college and 45.4% in dental school/dental hygiene program who used tobacco. While 22.5% used tobacco in the past, only 5.8% used while being in their professional education program. When the average responses of students with vs. without family members who used tobacco in the past were compared, the students with family-based experiences reported to having been better educated about the effects of tobacco on general health in college and in professional schools and being better educated about oral health effects than their peers without past tobacco-related family experiences. In addition, the students with these experiences were more likely to educate their patients about tobacco use and the oral health effects of tobacco use and intended to do so in the future. These differences were not found when comparing the average responses of students with vs. without friends who used vs. did not use tobacco products.

Conclusions: Family-based experiences with tobacco use affects students' motivation to learn about this topic and engage in tobacco cessation-related professional behavior during their professional education as well as in their future professional lives.

The objectives were

- (a) to assess the percentages of dental and dental hygiene students who had family members and friends who used tobacco and who used tobacco themselves and
- (b) to investigate whether growing up with family members and friends who used vs. did not use affected the students' responses to tobacco-related education and their professional behavior related to educating patients about this topic.

METHODS

This study was determined to be exempt from Institutional Review Board (IRB) oversight by the Health Sciences and Behavioral Sciences IRB at the University of Michigan, Ann Arbor, MI.

Study design: This research is a cross-sectional with data collected with a survey.

Respondents: Data were collected from 210 dental students and 30 dental hygiene students. (See Table 1).

Procedure: The students used a web-link provided in an email to access a survey concerning tobacco use in their families, among their friends and personal use and the effect of these experiences on their professional attitudes and behavior.

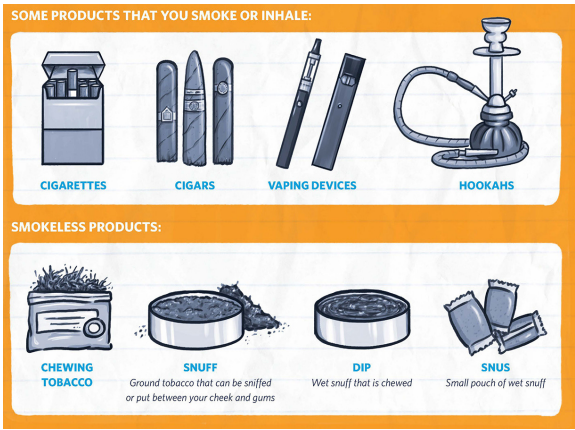


Table 1: Overview of the background characteristics

Background characteristics	Frequencies N = 240	Percentages
Gender:		
- male	93	38.8%
- female	146	60.8%
- non binary	1	0.4%
Race/ethnicity:		
- African American	11	4.6%
- Arab American	34	14.2%
- Asian American	43	17.9%
- American Indian	0	0%
- European American	136	56.7%
- Hispanic/Latinx	7	2.9%
- Biracial	9	3.8%
Age	Mean = 23.32	SD = 2.368 Range: 19-38
Educational background	Frequencies N = 240	Percentages
Type of student:		
- dental student	210	87.5%
- dental hygiene student	30	12.5%
Year in program:		
- 1 st Year	121	50.4%
- 2 nd Year	91	37.9%
- 3 rd Year	23	9.6%
- 4 th Year	5	2.1%

The first objective was to assess the percentages of dental and dental hygiene students who had family members and friends who used tobacco and who used tobacco themselves. Table 2 shows 54% of the respondents had family members who used tobacco products while they grew up and 30% had family members who were current users; 9.6% had friends in middle school, 43.8% in high school, 64.4% in college and 45.4% in dental school/dental hygiene program who used tobacco products. While 22.5% respondents used tobacco products in the past, only 5.8% used while being in their professional education program.

Table 3: Family/friend tobacco use and respondents' attitudes and behavior

Before dental/dental hygiene school, how important did you think it was that:	Did family use tobacco while you grew up?		p
	No	Yes	
- dentists educate patients about tobacco cessation?	3.94 ¹	4.02	0.590
-dental hygienists educate patients about tobacco cessation?	3.89	3.95	0.718
-you educate your current patients about tobacco cessation?	4.06	4.00	0.717
-you will educate patients about tobacco cessation?	4.06	4.12	0.647
-how much do you now educate patients about tobacco cessation?	2.57	2.88	0.099
-how much will you educate patients about tobacco cessation?	4.17	4.33	0.187
To what extent did family members' tobacco use influence:	No	Yes	p
-your decision to go to dental/dental hygiene school?	1.59	1.46	0.389
-your decision to improve your oral health?	1.87	1.96	0.619
-your decision to use tobacco products?	1.93	2.20	0.190
-your decision to educate patients about tobacco use?	1.83	2.48	<0.001
-your decision to educate patients about oral health?	1.89	2.50	0.002
-your willingness to educate future patients about tobacco use?	2.00	2.82	<0.001
-your willingness to educate your future - patients about oral health?	2.00	2.83	<0.001
To what extent did friends' tobacco use influence:	No	Yes	p
-your decision to go to dental/dental hygiene school?	1.35	1.28	0.534
-your decision to improve your oral health?	1.71	1.62	0.582
-your decision to use tobacco products?	1.94	2.09	0.416
-your decision to educate patients about tobacco use?	2.05	2.07	0.894
-your decision to educate patients about oral health?	2.07	2.09	0.914
-your willingness to educate future patients about tobacco use?	2.13	2.27	0.460
-your willingness to educate your future patients about oral health?	2.12	2.27	0.437

Legend
1 Answers ranged from 1= not at all to 5= very much

DISCUSSION

- U.S. dental institutions should stress the importance of tobacco cessation with their patients and motivate dental students to learn about tobacco use and oral health.
- More studies should be conducted to see how to increase motivation for those who do not have family-based experiences with tobacco.
- To gain a diverse set of information, more participants in this survey is necessary.

ACKNOWLEDGEMENTS

We want to thank

- the faculty at UMSOD for forwarding the email to their students.
- the students for taking time out of their busy schedules to respond to our survey.

Table 2: Responses of family and friends and own tobacco use

Responses related to family members' use of tobacco products	Family members:		Friends:	
	While growing up:	Now:	Middle / High school	College / Dental school
Did someone in your family use tobacco? Yes	54.2%	30.0%	9.6% / 43.8%	64.4% / 45.4%
# Persons who used/use tobacco products:				
- 0	48.1%	70.4%	90%/55.9%	35.6%/54.6%
- 1	30.5%	15.8%	3.3%/6.3%	8.9%/9.2%
- 2	9.4%	4.6%	2.9%/7.6%	11.9%/6.7%
- 3 and more	12%	9.3%	3.4%/30.1%	43.4%/29.5%
Mean	1.00	0.63	0.25/2.05	3.97/2.10
Respondents' tobacco use	In past:	Now:		
Did you ever use tobacco products? Yes	22.5%	5.8%		
How old were you when you started?	Mean = 18.30	Range: 13 - 23		

The second objective was to investigate whether growing up with family members and friends who used vs. did not use affected the students' responses to tobacco-related education and their professional behavior related to educating patients about this topic. Table 3 shows that when the average responses of students with vs. without family members who used tobacco in the past were compared, the students with family-based experiences reported having been better educated about the effects of tobacco on general health in college and in professional school and being better educated about oral health effects than their peers without past tobacco-related family experiences. In addition, students with these experiences were more likely to educate their patients about tobacco use and the oral health effects of tobacco use and intent to do so in the future. These differences were not found when comparing the average responses of students with vs. without friends who used vs. did not use tobacco products.

CONCLUSIONS

Family-based experiences with tobacco influences the motivation of students in the dental field:

- to learn about tobacco use and oral health and educate their patients on these topics;
- to engage in tobacco cessation during their professional education;
- to engage in tobacco cessation during their future professional lives.

REFERENCES

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2. Sham, ASK., Cheung, LK., Jing, IJ. And Corbet, EF. The effects of tobacco use on oral health. (2003). *Hong Kong Med J*, 9(4), 271-277.
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INTRODUCTION

- Tobacco use is the leading cause of preventable disease, disability, and death¹.
- Approximately half a million Americans die yearly from premature smoking or exposure to secondhand smoke.
- 16 million individuals exist with a serious illness that is associated with smoking.
- U.S. pays about \$170 billion on medical care for the purpose of managing care of individuals who have smoking-related diseases.
- Tobacco use contributes to one's oral health, leading to potential risk of acquiring periodontal diseases and oral cancers².
- The risk of oral cancer and periodontal disease decreases as individuals invest more time in cessation efforts, and some oral mucosal lesions may dissipate with cessation of smokeless tobacco use³.