



First tobacco product tried: Associations with smoking status and demographics among college students



Erin L. Sutfin ^{a,*}, Alicia Sparks ^b, Jessica R. Pockey ^c, Cynthia K. Suerken ^d, Beth A. Reboussin ^d, Kimberly G. Wagoner ^a, John Spangler ^e, Mark Wolfson ^a

^a Department of Social Sciences and Health Policy, Wake Forest School of Medicine, Medical Center Blvd., Winston-Salem, NC, USA

^b Department of Health, Behavior and Society, Johns Hopkins Bloomberg School of Public Health, and Abt Associates, Inc., Baltimore, MD, USA

^c West Chester, PA, USA

^d Department of Biostatistical Sciences, Wake Forest School of Medicine, Medical Center Blvd., Winston-Salem, NC, USA

^e Department of Family and Community Medicine, Wake Forest School of Medicine, Medical Center Blvd., Winston-Salem, NC, USA

HIGHLIGHTS

- We studied first tobacco product and current cigarette smoking by college students.
- Weighted prevalence of ever use of tobacco was 48.6%.
- Cigarettes were often first products, then cigars, hookah, smokeless, bidi/kreteks.
- About a third of current cigarette smokers initiated with a non-cigarette product.
- Demographic differences in first tobacco product tried are reported.

ARTICLE INFO

Article history:

Received 10 February 2015

Received in revised form 17 July 2015

Accepted 23 July 2015

Available online 26 July 2015

Keywords:

Non-cigarette tobacco products

College students

Cigarette smoking

ABSTRACT

Introduction: As the tobacco market expands, so too have the opportunities for youth to be introduced to nicotine. The goal of this study was to identify product choice for initial tobacco trial, correlates associated with product choice, and the relationship between first product and current cigarette smoking among college students.

Methods: A cross-sectional web survey of 3146 first-year students at 11 universities in North Carolina and Virginia was conducted in fall 2010.

Results: Weighted prevalence of ever use of tobacco was 48.6%. Cigarettes were the most common first product (37.9%), followed by cigars (29.3%), hookahs (24.6%), smokeless tobacco (6.1%), and bidis/kreteks (2.2%). Two thirds (65%) of current smokers initiated with cigarettes, but 16.4% started with cigars, 11.1% with hookahs, 5.7% with smokeless, and 1.7% with bidis/kreteks. Females were more likely to report their first product was cigarettes and hookahs, while males were more likely to start with cigars and smokeless tobacco. Compared to those whose first product trial occurred after the age of 18, younger age of initiation (17 years or younger) was associated with cigarettes and smokeless as first products, while older age of initiation (18 or older) was associated with starting with hookahs and cigars. Dual or poly tobacco use was more common among those who initiated with hookahs and smokeless tobacco.

Conclusions: While over a third of students used cigarettes first, two thirds started with a non-cigarette product. Just about a third of current cigarette smokers initiated with a non-cigarette product, suggesting that those non-cigarette products may have facilitated escalation to cigarettes.

© 2015 Elsevier Ltd. All rights reserved.

1. Introduction

With the proliferation of new tobacco products, youth have the opportunity to be introduced to nicotine in many ways. Historically

the choices were limited to cigarettes, cigars, chewing tobacco and snuff/dip, but today these have been joined by hookah, electronic cigarettes, bidis, kreteks, snus and dissolvable tobacco (U.S. Department of Health & Human Services, 2012). Given the changing landscape of tobacco, product choice for initiation may be shifting.

While the Family Smoking Prevention and Tobacco Control Act (FSPTCA) gave the Food and Drug Administration (FDA) broad authority to regulate cigarettes, roll your own tobacco and smokeless tobacco to protect public health, that authority does not yet apply to other tobacco

* Corresponding author at: Department of Social Sciences and Health Policy, Division of Public Health Sciences, Wake Forest School of Medicine, Medical Center Blvd., Winston-Salem, NC 27157, USA.

E-mail address: ESutfin@wakehealth.edu (E.L. Sutfin).

products (H.R., 1256, 2009). Recently, the FDA proposed to extend its authority to cover all tobacco products meeting the statutory definition (Food & Drug Administration, 2014). However, FDA's ban on "characterizing flavors" in cigarettes (i.e., distinguishable taste or aroma other than tobacco or menthol) was not proposed to extend to other tobacco products. Consequently, other tobacco products are available in a variety of flavors. There is considerable evidence that youth are attracted to flavored tobacco products (Klein, 2008). Villanti and colleagues conducted a study of a nationally representative sample of young adults and found that 18–24 year olds had 89% higher odds of using flavored tobacco products than 25–34 year olds (Villanti, Richardson, Vallone, & Rath, 2013). Black young adults, compared to Whites, had over two and a half times greater odds of using flavored tobacco. Even after controlling for menthol use, Black young adults were significantly more likely to use flavored tobacco products than Whites. Additionally, there is evidence that flavored tobacco products are associated with beliefs of less harm and lower addictive potential (Centers for Disease Control & Prevention, 1999; Primack et al., 2008). Therefore, the availability of these products in appealing flavors may be attractive to youth as a first product. However, little is known about product choice for initiation since the landscape of available products has changed.

A recent study of a nationally representative panel of young adults aged 18–25 found that 73% of tobacco users reported cigarettes were their first product, followed by 11% who initiated with cigars, 5% with little cigars/cigarillos/bidis, 4% with hookah, 3% with dip and 1% with chew (Rath, Villanti, Abrams, & Vallone, 2012). Although Rath and colleagues described product choice for initiation, they did not explore correlates, such as demographic and behavioral factors, associated with first product used. Nor did they assess how first product choice is related to current cigarette smoking.

While little is known about correlates associated with first tobacco product choice, research has consistently shown important demographic factors associated with tobacco use. For example, males are more likely to use several forms of tobacco, including cigars, bidis, kreteks (U.S. Department of Health & Human Services, 2012), hookahs (Barnett, Curbow, Weitz, Johnson, & Smith-Simone, 2009; Sutfin et al., 2011), snus (Johnston, O'Malley, Bachman, & Schulenberg, 2013) and dissolvables (McMillen, Maduka, & Winickoff, 2012) than females. While education is negatively associated with cigarette smoking (Green et al., 2007), McMillen and colleagues found that higher education was associated with having tried hookah, snus, or electronic cigarettes (McMillen et al., 2012). Associations of tobacco use and race are also well documented. White adolescents and young adults consistently smoke cigarettes, hookah, and use smokeless tobacco at higher rates than those of other races; however, differences by race are less pronounced for cigar smoking (Dugas, Tremblay, Low, Cournoyer, & O'Loughlin, 2010; Sutfin et al., 2011; U.S. Department of Health & Human Services, 2012).

Attracting nonsmokers with appealing flavors and impressions of reduced harm, these novel products may serve as an introduction to nicotine, setting up the potential for addiction (DiFranza & Wellman, 2005). Once tobacco use has been initiated, the risk of continued use and escalation to cigarettes is a primary concern (McMillen et al., 2012) and a critical research question. The relationship between first product and future tobacco use is not well understood. However, using a stratified random sample of 4486 high school students from Cuyahoga County in Cleveland, Brooks and colleagues studied the relationship between cigarette and cigar use, including which product was initiated first (Brooks, Gaier Larkin, Kishore, & Frank, 2008). They found that among adolescents who initiated with cigarettes, 17% were current cigarette smokers only, 16% currently smoked both cigarettes and cigars and 4% smoked only cigars. Conversely, among those who initiated with cigars, 15% reported currently smoking only cigarettes, 12% only cigars and 44% smoked both cigarettes and cigars. These findings suggest that initiating with cigars is associated with a higher prevalence of dual use than initiating with cigarettes. Meier et al. (2015) conducted a recent study assessing first product tried and subsequent tobacco

use among a sample of college students from a single university. They found that initiating tobacco use with either cigarettes or smokeless tobacco (chew or dip) compared to those who initiated with hookah or emerging tobacco products (dissolvables, snus or e-cigarettes) was associated with increased likelihood of current poly tobacco use (Meier, Tackett, Miller, Grant, & Wagener, 2015).

Understanding product initiation and factors related to which product is used first will begin to clarify the hypothesis that certain tobacco products may facilitate escalation to future cigarette smoking (McMillen et al., 2012). The goals of this study were to: (1) identify the first tobacco product tried among a large sample of young adults, (2) assess the relationship between first product tried and subsequent cigarette smoking and (3) identify demographic correlates associated with first product tried to identify potential targets for intervention.

2. Methods

2.1. Sample

Data are from the baseline survey of a larger study entitled *Smokeless Tobacco Use in College Students*. The goal of the parent study was to assess trajectories and correlates of smokeless tobacco use in a cohort of college students over the course of their college careers. This study included 11 colleges and universities in North Carolina and Virginia with seven of the participating schools in North Carolina and four in Virginia (Wolfson et al., 2013). Nine were public schools and two were private. Undergraduate enrollments ranged from about 4000 to 23,000.

In the fall of 2010, 10,624 incoming first-year students at the 11 schools completed a brief screener survey used to determine eligibility for the longitudinal cohort study. Students were emailed an invitation to participate in a brief web-based screener survey. The response rate for the screener survey was 36% (Spangler et al., 2014). Students who ever used smokeless tobacco products, current cigarette smokers and males were oversampled for inclusion in the cohort. All other students, including non-smokers and those who never used smokeless tobacco, were randomly sampled for cohort inclusion.

Two weeks after the screener survey, a sample of those screened eligible was invited to participate in the longitudinal cohort survey. Potential participants were contacted via email which included a link to a secure website for survey completion. The survey took about 20 minutes to complete. Non-respondents received up to four email reminders, a phone call and a text reminder. Participants received a \$15 incentive. Of the 4902 invited to participate, 3146 completed the baseline fall 2010 cohort survey for a response rate of 64.2%.

The study protocol was approved by the Wake Forest School of Medicine Institutional Review Board (IRB). Three participating campuses required local IRB approval, while the remaining schools accepted the Wake Forest approval. Additional privacy protection was secured by a Certificate of Confidentiality issued by the Department of Health and Human Services.

2.2. Measures

2.2.1. Demographic characteristics

Demographic characteristics included gender, race (coded as Non-White vs. White), ethnicity (Hispanic vs. Non-Hispanic) and maternal educational level (some college education or less vs. college degree or higher).

2.2.2. Lifetime tobacco use

Students were considered lifetime tobacco users if they answered affirmative to: *Have you ever smoked/used [product], even one or two puffs/times?* Products assessed included: cigarettes, cigars, chewing tobacco, moist or dry snuff (dip), snus, dissolvables, bidis, kreteks (cloves), e-cigarettes, or waterpipes (hookahs). Descriptions of products were included.

Download English Version:

<https://daneshyari.com/en/article/7260667>

Download Persian Version:

<https://daneshyari.com/article/7260667>

[Daneshyari.com](https://daneshyari.com)