

2003 N.C. Youth Tobacco Survey Results

Independence from Tobacco (Never Used) and Future Susceptibility among Middle and High School Students—North Carolina, 2003

Background

Each day in the United States, approximately 4,400 youths aged 12-17 try their first cigarette.¹ An estimated one third of these young smokers is expected to die from a smoking-related disease.² The North Carolina Youth Tobacco Survey (YTS), conducted by the N.C. Tobacco Prevention and Control Branch and Department of Public Instruction, provides estimates of tobacco use (i.e., cigarettes, cigars, smokeless tobacco, pipes and bidis [leaf wrapped, flavored cigarettes from India]) among middle and high school students in North Carolina. This report focuses on the prevalence of students that report having never used tobacco (i.e., “never smokers”) and the percentage of “never smokers” that are susceptible to begin smoking based on the 2003 NC YTS. This report also describes changes in the prevalence of “never smoking” and susceptibility between 1999 and 2003. The prevalence of students reporting “never use” in middle school (i.e., grades 6—8) and high school (i.e., grades 9—12) increased significantly during 1999-2003; however, susceptibility to start smoking cigarettes remained high. For “never smokers”, susceptibility to start smoking was 19.6% for middle and 23.3% for high school students. Thus, 1 in 5 students that have never smoked is considered at risk of starting to smoke in the near future. Evidenced-based pro-health media messages aimed at youth and other comprehensive aspects of tobacco control programs should be implemented at the CDC-recommended minimum state budget amounts.

Methodology

The sampling frame for the drawn sample consisted of all public and charter schools in North Carolina. A total of 91 primary sampling units (PSUs) based on Local Education Areas (LEAs) [i.e., school districts] were selected in the first stage of sampling in three distinct geographic regions of the state (west, central and east), and 216 schools were selected from these PSUs in the second stage of sampling. Of these 216 eligible schools, 200 participated (school response rate 92.6%) in the 2003 NC YTS. Classes were then randomly selected proportional to overall school enrollment for each school. Participation was voluntary and anonymous, and school parental permission procedures were followed; students recorded their responses on computer-scannable answer sheets.

Results

Among the students attending the 200 participating schools, 3,073 middle school students and 3,261 high school students (83.5% student response rate) completed the survey, resulting in an overall response rate of 77.3%. Data were weighted to be representative statewide and by region. CDC and RTI International processed the data and generated basic summary data tables. “Never use” of a specific tobacco product was defined as not having ever used that product in their lifetime. Students were considered not susceptible if they answered, “No, will not try a cigarette soon”; “Definitely no, will not smoke in the next year” and “Definitely no, would not smoke if best friend offered.” All other students reporting “never use” were considered susceptible.

In 2003, nearly two-thirds (62.4%) of middle school students reported never using any tobacco product (Table 1). More students reported having never used kreteks, or clove cigarettes (96.9%), followed by bidis (95.4%), smokeless tobacco (87.0%), cigars (84.9%), and cigarettes (70.5%). Females were more likely to be never users than males of all tobacco product types with significant differences among cigar, smokeless tobacco and bidis. No significant differences were found for any type of never tobacco use by race/ethnicity.

Among high school students, more than one-third (34.5%) reported having never used any tobacco product (Table 2). Patterns of “never use” among middle school students were similar to high school students with 94.9% reporting having never used kreteks or clove cigarettes, followed by bidis (92.3%), smokeless tobacco (78.6%), cigars (63.9%) and cigarettes (40.4%). Females were more likely to be never users than males of all tobacco product types with significant differences among cigars, smokeless tobacco and any tobacco. Whites were more likely to use smokeless tobacco than blacks or Hispanics. Whites were also

2003 N.C. Youth Tobacco Survey Results

more likely to use kreteks than blacks. No other significant differences were found in “never use” by race/ethnicity.

Since 1999

Never using any tobacco product has increased from 55.3% in 1999 to 62.4% in 2003 among middle school students. “Never use” of cigarettes and cigars has significantly increased in every category with the exception of Hispanics whose use stayed the same from 1999 to 2003. No significant changes were found among middle school never users of smokeless tobacco. Kretek and bidi use were not assessed in 1999.

Never using any tobacco product has increased from 27.8% in 1999 to 34.5% in 2003 among high school students. “Never use” of cigarettes increased overall from 31.8% to 40.4%, in males from 30.0% to 38.8%, in females from 33.6% to 42.1% and among whites from 31.1% to 42.2%. “Never use” of cigars has significantly increased in every category with the exception of Hispanics whose use stayed the same from 1999 to 2003. No significant changes were found among high school never users of smokeless tobacco. Kretek and bidi use were not assessed in 1999.

Since 2001, among middle school students, the prevalence that reported never smoking cigars increased from 78.8% in 2001 to 84.9% in 2003. Never smoking cigars among males increased from 74.8% in 2001 to 81.2% in 2003. High school “never use” of kreteks increased from 91.9% in 2001 to 94.9% in 2003 and bidis from 88.0% in 2001 to 92.3% in 2003. No other significant differences were noted among middle or high school students since 2001.

Susceptibility

Approximately 1 in 5 students that have never smoked is at risk of starting. Among “never smokers”, 19.6% of middle school students and 23.3% of high school students are susceptible to start smoking. Black middle school students were considered more susceptible than white students. No other statistically significant differences by gender or race/ethnicity were found among either middle or high school students. These at-risk-students have self-reported intentions to start smoking in the future and programmatic efforts should be developed to discourage future use.

References:

1. SAMHSA. National Household Survey on Drug Abuse, 2001. US DHHS, publication no. (SMA) 02-3759.
2. CDC. Projected smoking related deaths among youth. MMWR 1996;45(44):971-4.

2003 N.C. Youth Tobacco Survey Results

Table 1. Percentage of students in middle school (i.e., grades 6—8) who never have used* any tobacco, by product type, sex, and race/ethnicity—Youth Tobacco Survey, North Carolina, 2003 and 2001

Characteristic	Any tobacco+		Cigarettes		Cigars		Smokeless tobacco		Kreteks		Bidis	
	%	(95% CI) [§]	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
Middle school, 2003												
Sex												
Male	59.6	(±4.2)	69.8	(±3.9)	81.2	(±2.7)	81.9	(±3.4)	96.3	(±1.2)	93.4	(±2.0)
Female	65.2	(±4.6)	71.2	(±5.5)	88.8	(±2.4)	92.3	(±1.5)	97.6	(±1.2)	97.4	(±1.0)
Race/Ethnicity												
White	65.0	(±4.3)	73.1	(±4.1)	86.2	(±2.5)	85.2	(±2.3)	97.1	(±1.0)	96.5	(±0.9)
Black	58.2	(±5.1)	66.1	(±5.9)	82.5	(±3.5)	90.2	(±3.0)	97.2	(±1.7)	94.2	(±2.2)
Hispanic	56.4	(±12.7)	64.7	(±12.3)	81.1	(±7.3)	88.1	(±6.0)	95.5	(±5.3)	94.7	(±5.4)
Total	62.4	(±3.8)	70.5	(±4.0)	84.9	(±2.2)	87.0	(±2.1)	96.9	(±1.0)	95.4	(±1.0)
Middle school, 2001												
Sex												
Male	54.2	(4.5)	64.6	(4.7)	74.8	(3.8)	81.8	(2.6)	96.1	(1.1)	91.6	(1.9)
Female	60.6	(5.2)	65.3	(5.1)	83.2	(3.3)	91.5	(1.8)	96.8	(1.1)	95.1	(1.3)
Race/Ethnicity												
White	62.0	(4.7)	68.4	(4.7)	81.8	(3.6)	86.7	(2.2)	96.9	(0.8)	95.1	(1.2)
Black	52.4	(4.8)	60.4	(5.5)	76.2	(3.6)	88.4	(2.2)	96.1	(1.2)	90.9	(2.1)
Hispanic	61.9	(10.2)	73.7	(8.5)	78.9	(6.9)	88.9	(7.4)	96.5	(2.5)	94.4	(3.8)
Total	57.2	(4.6)	64.9	(4.7)	78.8	(3.0)	86.5	(1.8)	96.3	(0.9)	93.1	(1.5)
Middle school, 1999												
Sex												
Male	51.7	(3.7)	58.4	(3.9)	71.8	(3.1)	81.6	(2.1)	NA		NA	
Female	59.2	(2.3)	63.1	(2.3)	83.5	(1.8)	92.1	(1.0)	NA		NA	
Race/Ethnicity												
White	58.4	(2.8)	64.2	(2.9)	80.0	(2.3)	86.7	(1.5)	NA		NA	
Black	50.5	(4.0)	54.9	(4.1)	74.3	(2.8)	89.2	(2.4)	NA		NA	
Hispanic	54.2	(5.9)	59.1	(5.9)	76.3	(4.2)	87.1	(3.8)	NA		NA	
Total	55.3	(2.5)	60.7	(2.6)	77.6	(2.1)	86.8	(1.2)	NA		NA	

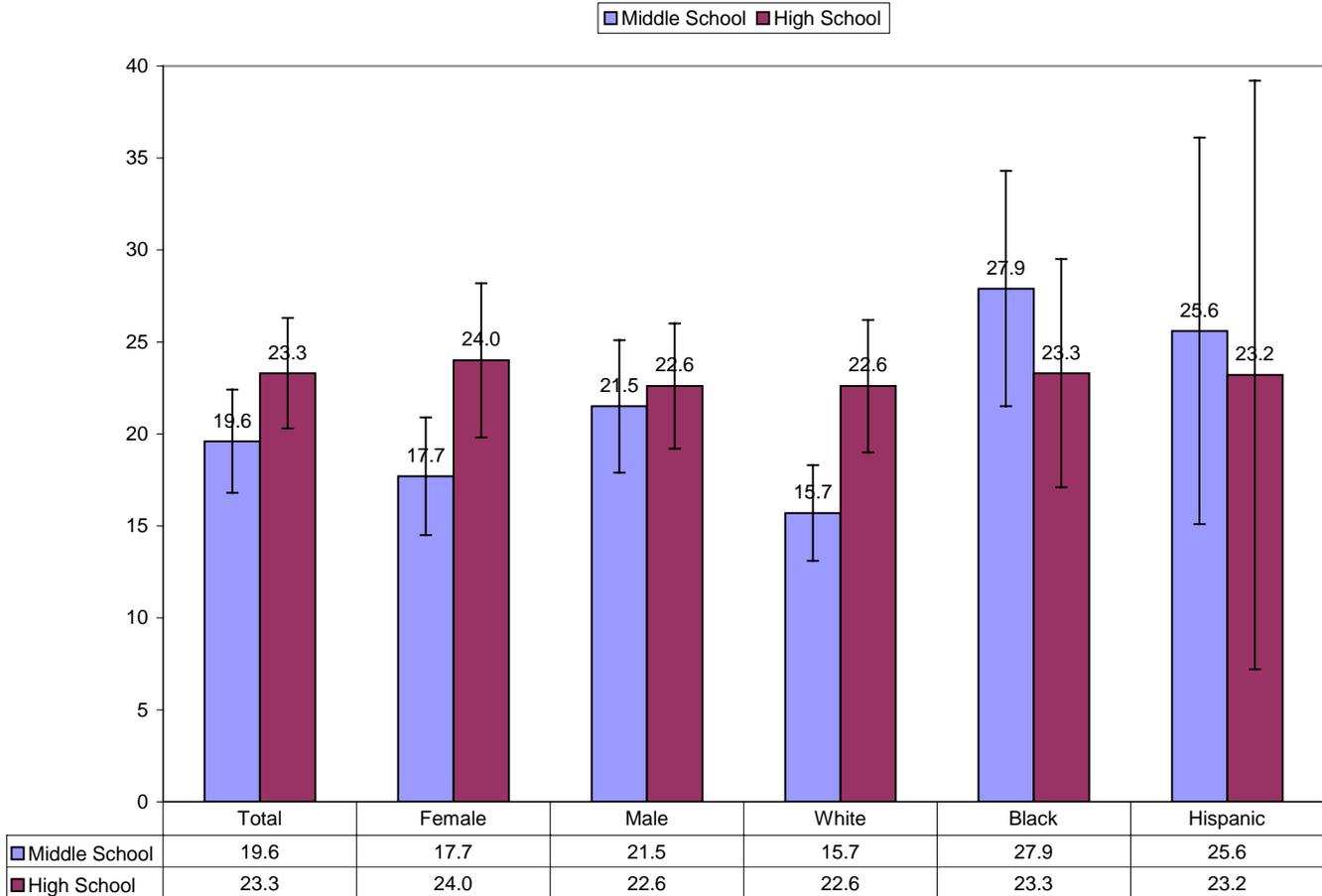
Table 2. Percentage of students in high school (i.e., grades 9—12) who have never used* any tobacco, by product type, sex, and race/ethnicity—Youth Tobacco Survey, North Carolina, 2003 and 2001

Characteristic	Any tobacco+		Cigarettes		Cigars		Smokeless tobacco		Kreteks		Bidis	
	%	(95% CI) [§]	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)	%	(95% CI)
High school, 2003												
Sex												
Male	30.9	(±3.2)	38.8	(±4.4)	54.8	(±4.5)	68.1	(±5.0)	94.1	(±1.7)	90.1	(±3.1)
Female	38.4	(±3.6)	42.1	(±4.6)	73.0	(±3.5)	89.3	(±2.2)	95.9	(±1.4)	94.6	(±1.7)
Race/Ethnicity												
White	35.7	(±4.5)	42.2	(±5.2)	62.0	(±4.0)	72.0	(±3.6)	93.7	(±2.0)	91.7	(±2.7)
Black	32.9	(±4.4)	37.9	(±4.9)	69.1	(±5.6)	90.9	(±3.3)	97.7	(±1.1)	93.2	(±2.0)
Hispanic	28.0	(±8.4)	34.8	(±9.6)	60.2	(±7.8)	88.4	(±4.7)	96.7	(±3.0)	94.2	(±3.7)
Total	34.5	(±3.1)	40.4	(±4.1)	63.9	(±3.4)	78.6	(±3.0)	94.9	(±1.3)	92.3	(±2.0)
High school, 2001												
Sex												
Male	27.7	(5.1)	34.1	(4.9)	50.8	(5.0)	66.4	(5.3)	90.0	(2.0)	83.3	(3.2)
Female	34.7	(2.7)	37.5	(3.0)	69.2	(2.5)	87.7	(1.8)	93.9	(1.7)	92.7	(1.4)
Race/Ethnicity												
White	30.5	(3.3)	35.2	(3.6)	57.6	(2.7)	72.5	(4.0)	92.3	(1.6)	89.7	(1.9)
Black	34.9	(5.0)	38.9	(5.5)	70.9	(4.6)	86.6	(3.4)	94.4	(2.4)	87.4	(2.9)
Hispanic	28.1	(8.8)	35.6	(7.4)	50.3	(6.9)	81.1	(6.9)	86.1	(4.9)	82.8	(6.2)
Total	31.2	(3.6)	35.8	(3.8)	60.0	(3.2)	77.0	(3.1)	91.9	(1.4)	88.0	(2.2)
High school, 1999												
Sex												
Male	24.4	(2.2)	30.0	(2.2)	44.6	(2.5)	67.1	(3.5)	NA		NA	
Female	31.3	(3.0)	33.6	(3.2)	63.3	(2.8)	89.6	(1.6)	NA		NA	
Race/Ethnicity												
White	26.9	(2.6)	31.1	(2.7)	51.7	(2.6)	74.1	(2.7)	NA		NA	
Black	28.8	(3.7)	33.1	(3.6)	58.5	(4.2)	87.6	(2.0)	NA		NA	
Hispanic	30.0	(7.0)	30.9	(7.6)	61.5	(7.0)	84.5	(4.0)	NA		NA	

2003 N.C. Youth Tobacco Survey Results

Total **27.8** **(2.3)** **31.8** **(2.3)** **54.0** **(2.1)** **78.5** **(2.1)** **NA** **NA**
 * Never used tobacco in their lifetime (inverse of ever use).
 + Cigarettes, cigars, smokeless tobacco, kreteks, or bidis (leaf-wrapped, flavored cigarettes from India).
 § Confidence interval.

Figure 1. Percentage of middle and high school students considered susceptible* to start smoking, by gender, grade, and race/ethnicity: North Carolina Youth Tobacco Survey, 2003.



* Students were considered not susceptible if they answered, “No, will not try a cigarette soon” and “Definitely no, will not smoke in the next year” and “Definitely no, would not smoke if best friend offered.” All other students were considered susceptible.
 Note: Specific data on the ninety-five percent confidence intervals are available from the Tobacco Prevention and Control Branch.