



Tobacco Use Among Virginia's
Middle and High School Students

Results of the 2005 Youth Tobacco Survey
with comparisons to the 2003 survey results

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Executive Summary

The Virginia Youth Tobacco Survey was conducted in the fall of 2005. Public school students in grades 6 through 12 were asked about tobacco use, availability of tobacco products, environmental tobacco smoke, tobacco prevention education, tobacco advertisements, and depictions of tobacco in media. Survey results indicate that the significant drop in rates of tobacco use for Virginia youth seen from the 2001 to 2003 findings were generally maintained through 2005. Some of the findings of this survey include:

- The proportion of students reporting having ever used any tobacco products has fallen from 56% in 2001 to 45% in 2005. Twenty-seven percent of high school students and 12% of middle school students reported that they currently use a tobacco product. (Tobacco products are defined as cigarettes, cigars, smokeless tobacco, pipes, bidis [leaf-wrapped, flavored cigarettes from India], and kreteks [clove cigarettes]).
- Forty-nine percent of Virginia's high school students and 23% of middle school students reported having tried cigarettes. Twenty-two percent of high school students and 8% of middle school students report that they currently smoke cigarettes.
- Twenty-one percent of all high school students and 18% of all middle school students initiated tobacco use before the age of thirteen. Male students were more likely than female students to try tobacco before the age of thirteen.
- Nine percent of high school students were established smokers, having smoked over 100 cigarettes in their lifetime and on 20 or more of the past 30 days. About one and a half percent (1.4%) of middle school students were noted as established smokers.
- Students who have tried smoking cigarettes, but have smoked less than 100 cigarettes in their lifetime, were considered experimenters. Thirty-one percent of high school students and 18% of middle school students were experimenters.
- Ninety percent of students believed that smoke from other people's cigarettes was "probably" or "definitely" harmful to them.

The survey results show that even though the major declines in the first years of this decade are remaining stable, there remain significant numbers of tobacco users throughout the Commonwealth. Given the recent findings in national surveys that the rates of younger smokers have slowed their decline, and in some cases have stopped (see footnotes on page 6), it is necessary to continue the prevention efforts implemented in previous years. Prevention efforts need to be continued, if not increased, to urge the youth of Virginia to refrain from using tobacco products.

Introduction

The Virginia Youth Tobacco Survey (Virginia YTS) is sponsored by the Virginia Tobacco Settlement Foundation, administered by Virginia Commonwealth University's Survey and Evaluation Research Laboratory (SERL) and Community Health Research Initiative (CHRI) offices, with guidance from the Center for Disease Control and Prevention (CDC). The Youth Tobacco Survey (YTS) was designed by the CDC as part of its Youth Tobacco Surveillance and Evaluation System. This system is designed to assist states in developing and maintaining their state-based comprehensive tobacco prevention and control programs. The Youth Tobacco Surveillance and Evaluation System includes international, national, and state school-based surveys of middle and high school students.

The YTS is intended to enhance the capacity of state agencies and organizations to design, implement, and evaluate tobacco prevention and control programs. The aim of the Virginia YTS is to assess Virginia's youth tobacco use. The information obtained from the survey will provide the details which can then be used to more effectively target, plan and improve prevention and cessation programs. These data can also be compared to national data to assess where Virginia stands nationwide.

National youth data is collected utilizing the National Youth Tobacco Survey (NYTS), which was first conducted during fall 1999. The NYTS is representative of all students in the 50 states and the District of Columbia and is conducted every other year. State Youth Tobacco Surveys were first offered in 1998, when three states participated. There has been a gradual increase in state participation each year. Virginia first participated in 2001 and continued participation in 2003 and 2005. The Virginia Tobacco Settlement Foundation expects to sponsor the state survey every other year.

The prevalence of cigarette smoking nationwide among high school students increased during the 1990s, peaking during 1996–1997, then began a gradual decline¹. However, published reports regarding national youth surveys have found that the rate of decline in teens' use of cigarettes has been decelerating over the past several years and has even halted in some cases, especially for younger students². The latest available results from the 2004 National Youth Tobacco Survey show that the overall prevalence of any tobacco use or cigarette smoking did not change from 2002-04³. Survey results from the 2005 Virginia YTS reported similar outcomes: declines were seen in the percentage of students using tobacco products from 2001 (initial state participation in the YTS) to 2003, and these percentages generally remained stable from 2003 to 2005.

Over 2,200 students (1,124 middle school and 1,090 high school students) from across the state of Virginia participated in the 2005 Youth Tobacco Survey. This report provides a complete look at the results of the 2005 Youth Tobacco Survey and describes changes in prevalence since the initial participation in this statewide effort. Please note that the calculated margin of sampling error for this survey ranged from +/- 1% to +/- 5% on individual items. Therefore, any variations in percentages between the 2003 and 2005 survey administrations that are under 5% cannot be assumed to show true statistical difference.

¹ Centers for Disease Control and Prevention. CDC Surveillance Summaries, November 2, 2001. MMWR 2001; 50 (No. SS-4).

² Johnston, L. D., O'Malley, P. M., Bachman, J. G. & Schulenberg, J. E. (December 19, 2005). Decline in teen smoking appears to be nearing its end. University of Michigan News and Information Services: Ann Arbor, MI. [On-line]. Available: www.monitoringthefuture.org.

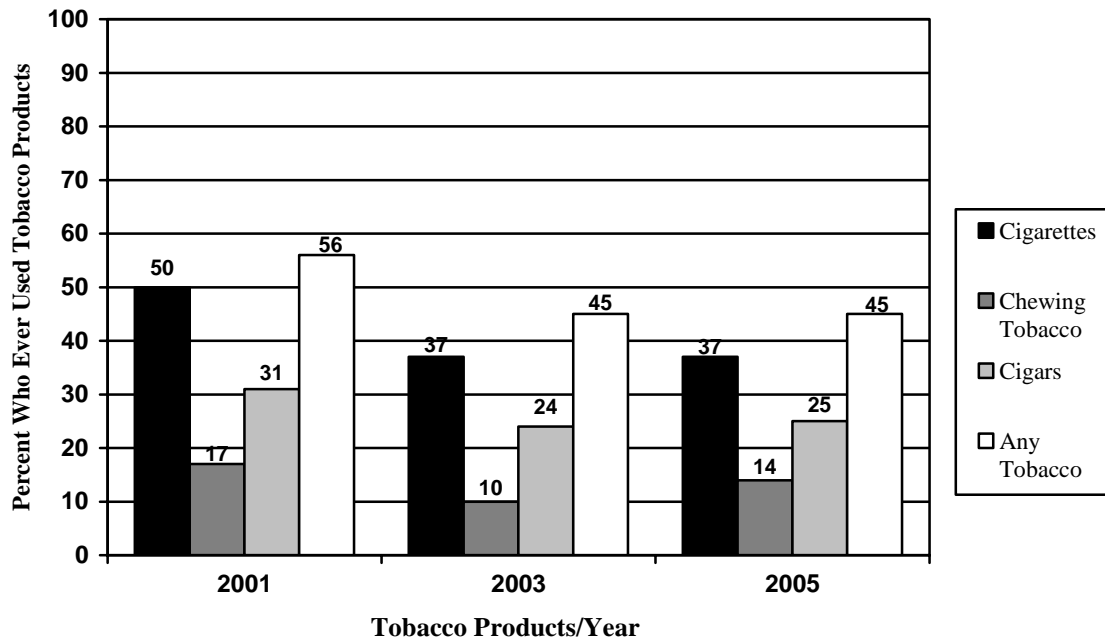
³ Centers for Disease Control and Prevention. Tobacco Use, Access, and Exposure to Tobacco in Media Among Middle and High School Students—United States, 2004. MMWR 2005; Vol. 54, No. 12. [On-line]. Available: <http://www.cdc.gov/tobacco/nyts/correctionnotice.htm>.

Results

Ever Used Tobacco Products

Students reporting ever having used any tobacco products⁴ fell from 56% to 45% from 2001 to 2003. This result was unchanged in 2005, with the percentage of students using any tobacco products remaining at 45% (Figure 1). The percentage of students who had ever tried cigarettes also remained stable; 37% of students reported they had tried cigarette smoking in both 2003 and 2005. Virginia students reported increases from 2003 in the percentages who had ever tried smokeless or chewing tobacco (from 10% to 14%), and cigars or cigarillos (from 24% to 25%). The percentage of students who reported ever using bidis or kreteks declined slightly (from 9% in 2003 to 8% in 2005).

Figure 1: Ever Used Tobacco Products by Year



⁴ Any tobacco products are defined as any of the following: cigarettes, cigars, smokeless tobacco, pipes, bidis [leaf-wrapped, flavored cigarettes from India], and kreteks [clove cigarettes].

Ever Smoked Cigarettes

The percentage of Virginia middle school students who have ever smoked cigarettes increased between 2003 and 2005, from 20% to 23%. Virginia high school students, however, saw a slight drop from 50% to 49% within the same period (Figure 2). When separated by gender, younger females show the greatest increase since 2003 (Figure 3). The percentage of middle school females who had ever smoked cigarettes rose from 17% in 2003 to 22% in 2005; middle school males saw an increase from 22% to 24% during the same period. The percentage of high school females who reported ever having smoked cigarettes decreased from 49% to 47% since 2003, while the percentage of high school males remained fixed at 51%.

Notable results also occurred among the different races between 2003 and 2005 (Figure 4). White students and Hispanic students saw slight decreases in the percentages who have ever smoked cigarettes, falling from 35% to 34% and 49% to 47% respectively. The percentage of black students who ever smoked cigarettes noted the only increase since 2003 (40% to 46%).

Figure 2: Ever Smoked Cigarettes by Level and Year

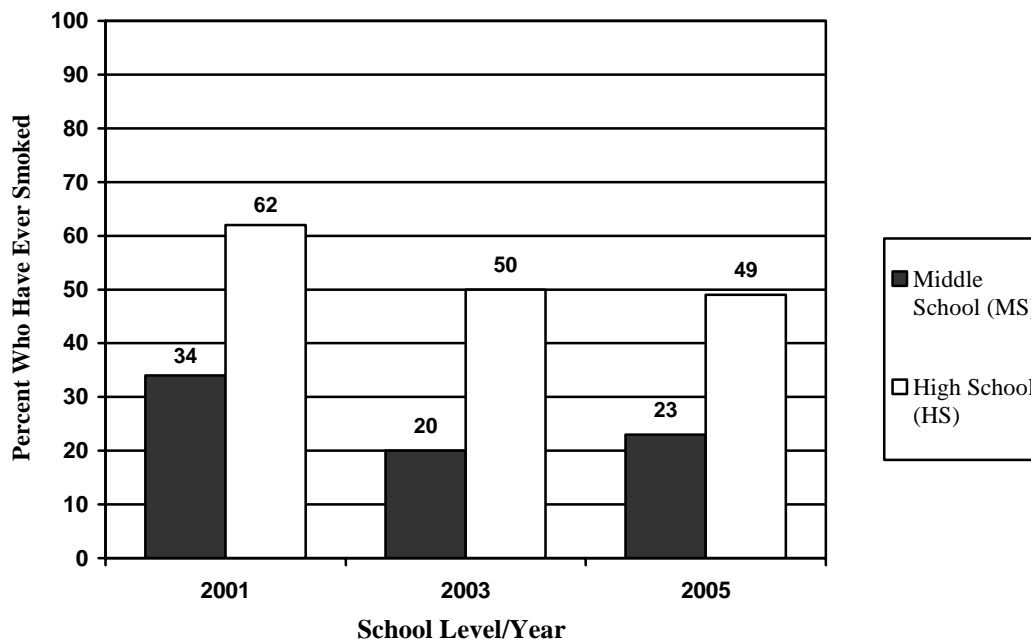


Figure 3: Ever Smoked Cigarettes by Gender, Level, and Year

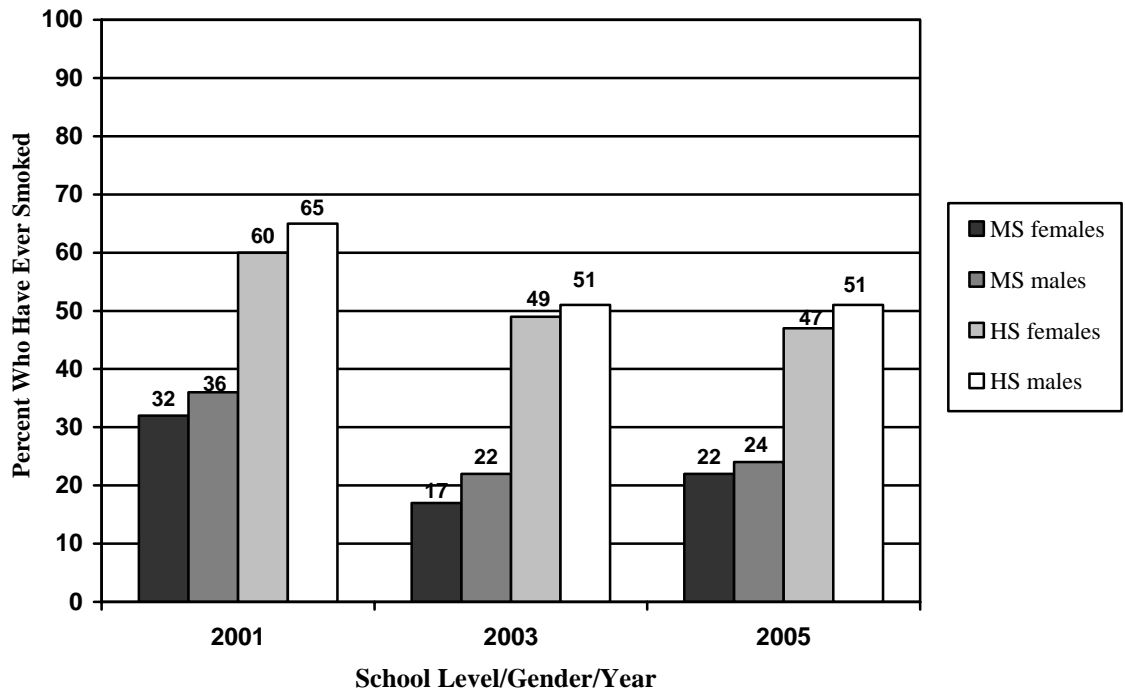
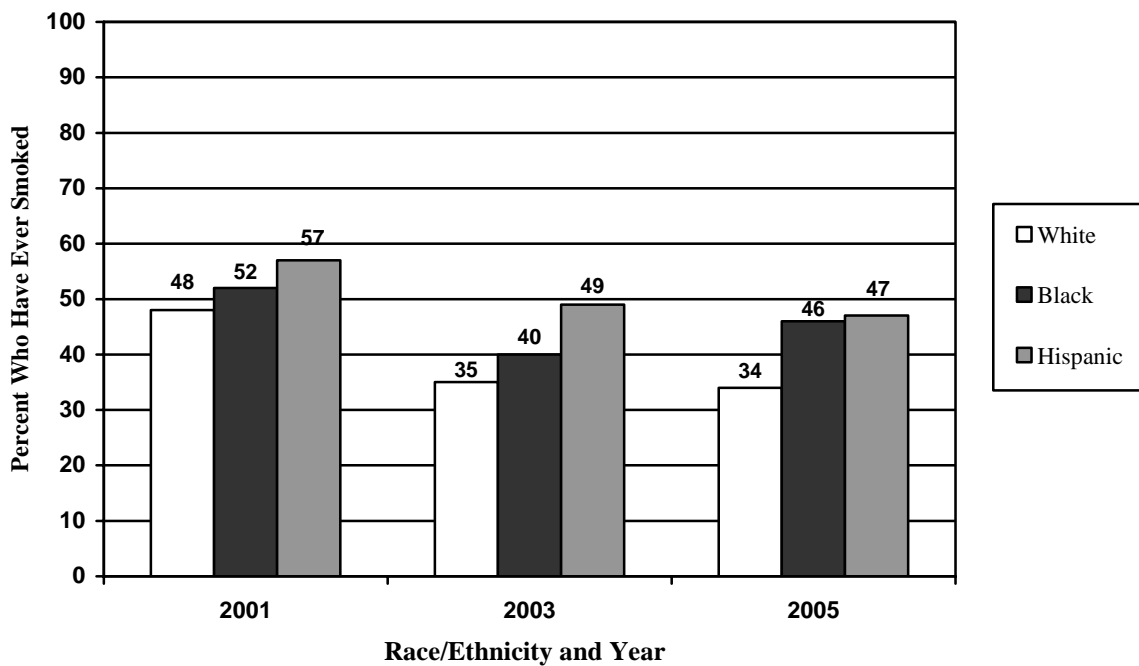


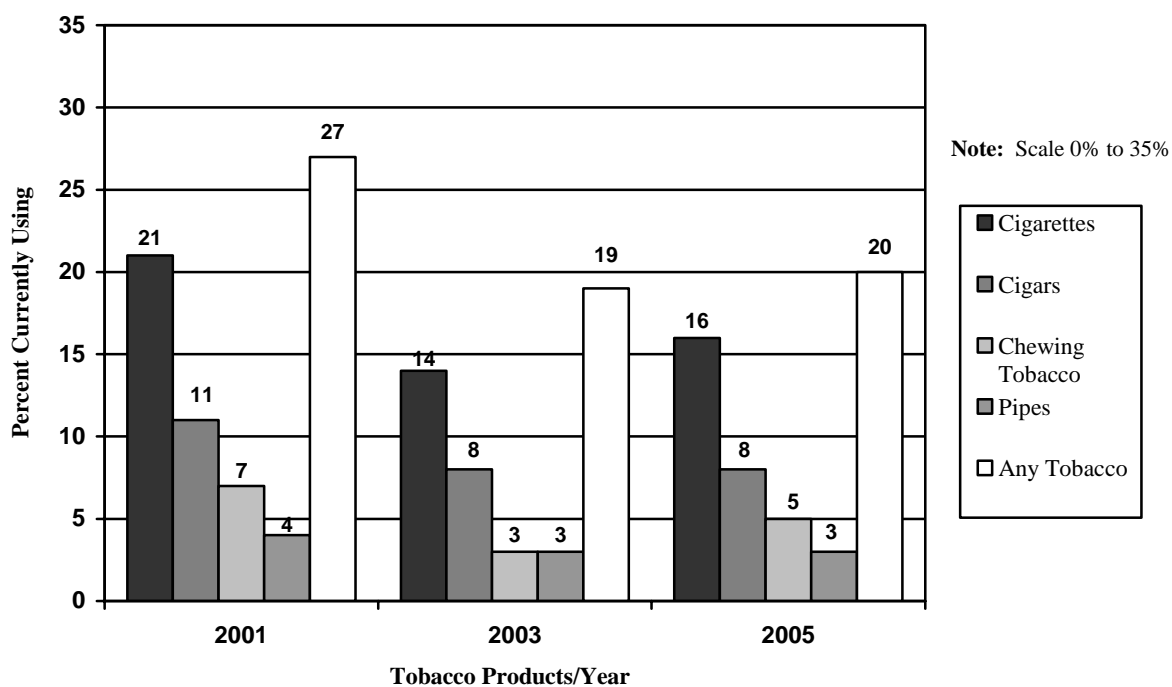
Figure 4: Ever Smoked Cigarettes by Race/Ethnicity and Year



Current Use of Tobacco Products

Students who reported using a tobacco product on one or more days during the past month were considered to be current users. Twenty percent of Virginia students currently use a tobacco product, essentially the same as the 19% reported in 2003. While the percentage of high school students reportedly using tobacco products has remained constant since 2003 (27%), middle school responses indicate that 12% of students currently use a tobacco product, up from 10% in the same two year period. The rates of current cigarette smoking and the use of smokeless or chewing tobacco both increased slightly since 2003, but have not neared the percentages seen in 2001 (Figure 5). The percentages of students currently using cigars or cigarillos, bidis or kreteks, and tobacco in pipes have shown no change since 2003.

Figure 5: Current Use of Tobacco Products (1 or More Days During Past Month) by Year



Current Use of Cigarettes

In 2005, the percentage of current cigarette smokers in Virginia schools was reported at 16%, up from 14% in 2003. The percentage of middle school smokers rose slightly over the two year period (from 6% to 8%), as did the percentage of high school smokers (from 21% to 22%). When separated by gender, some noteworthy results are seen (Figure 6). In 2003, the percentage of female and male middle school students that currently smoked cigarettes was equal (6%). In 2005, 9% of female middle school students report being current smokers, while only 7% of their male counterparts report the same. Female high school students saw a decrease in the rates of current smoking from 2003 to 2005 (from 19% to 18%); even as male high school students showed the greatest increase in current cigarette use (from 22% to 26%).

When examining the data by race/ethnicity, it was found that current smoking among Hispanic students continued to steadily decrease as it has since 2001, declining from 23% in 2003 to 13% in 2005 (Figure 7). Conversely, both black and white students saw the percentage of current smokers rise during the same time period. Black students reported an increase from 11% to 13%, and the percent of white students who reported currently using cigarettes rose from 15% to 18% since 2003.

Figure 6: Current Smoking (1 or More Days During Past Month) by Gender, Level, and Year

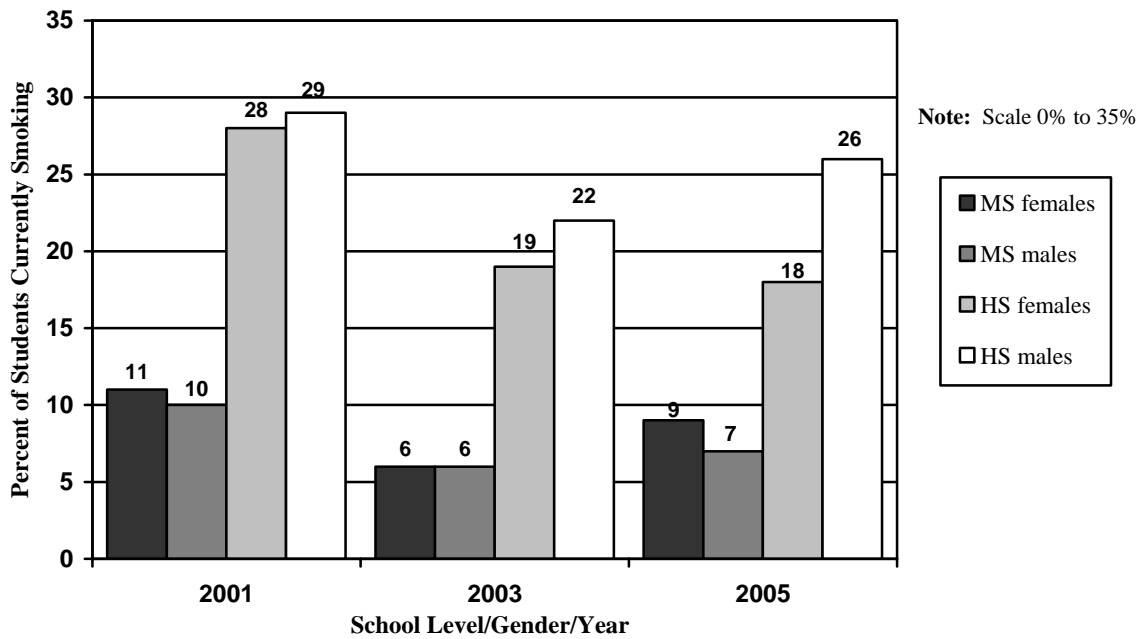
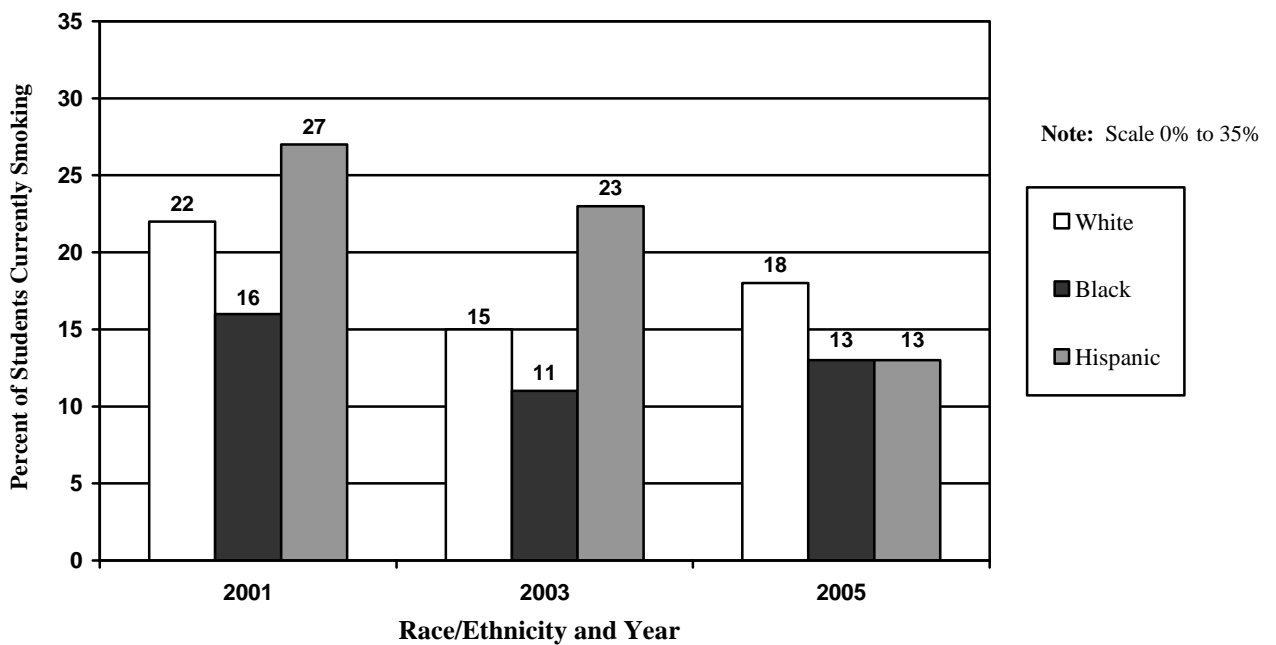


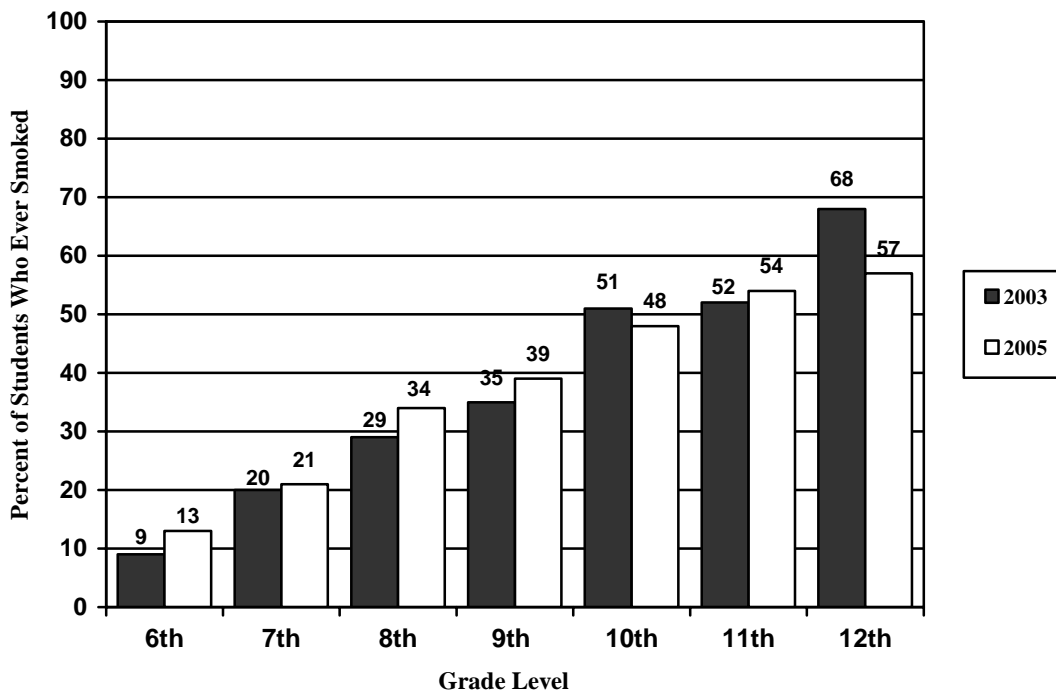
Figure 7: Current Smoking by Race/Ethnicity and Year



Ever Smoked Cigarettes by Grade

As found in the 2003 study, the percentage of students who have ever smoked cigarettes increased gradually from 6th to 12th grade in 2005 (Figure 8). In 2005, the largest jumps in the percentages of students who have ever tried smoking occurred between 6th and 7th grades (from 13% to 21%), between 7th and 8th grades (from 21% to 34%), and between 9th and 10th grades (from 39% to 48%).

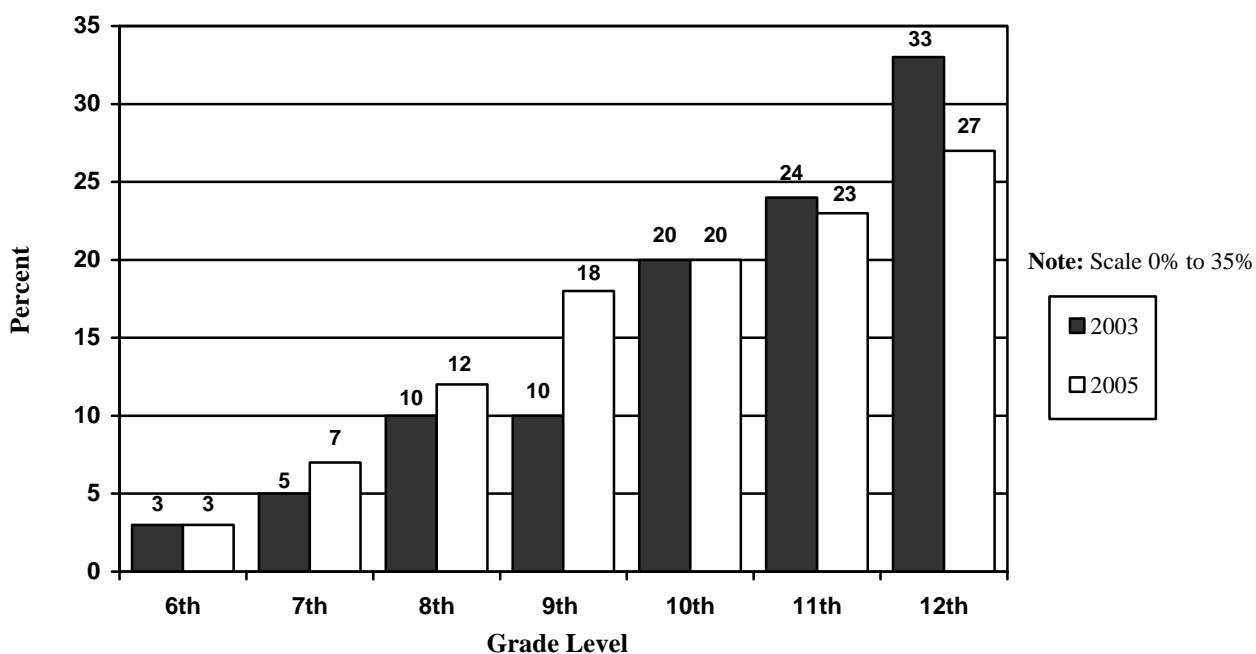
Figure 8: Ever Smoked Cigarettes by Grade for 2003 and 2005



Current Use of Cigarettes by Grade

The percentage of students who identify themselves as current smokers also increases gradually by grade from 3% of 6th grade students to 27% of high school seniors (Figure 9). The largest increase in percentages of those who currently smoke cigarettes is between the 8th and 9th grade (from 12% to 18%), seeming to occur as students go from middle to high school.

Figure 9: Current Smoking by Grade for 2003 and 2005



Initiation of Any Tobacco Use Before Age 13 (Gender)

The percentage of students who reported having smoked a whole cigarette before age 13 remained at 14% from 2003 to 2005. The rates for middle school males and high school females fell; however, middle school females and high school males reported increases in percentages of those initiating smoking prior to age 13 (Figure 10). The biggest increase in the use of any tobacco product before age 13 was with chewing tobacco, snuff, or dip which grew from 4% to 7% in middle schools and 3% to 5% in high schools in 2005 (Figure 11). This increase was consistent across gender for middle school students; however, while high school males reported increased use, high school females saw a slight decrease in the percentage reporting chewing tobacco, snuff, or dip use before age 13. The use of cigars or cigarillos before the age of 13 declined for both genders at both middle and high school levels.

Figure 10: Initiation of Smoking Before Age 13 by Gender, Level, and Year

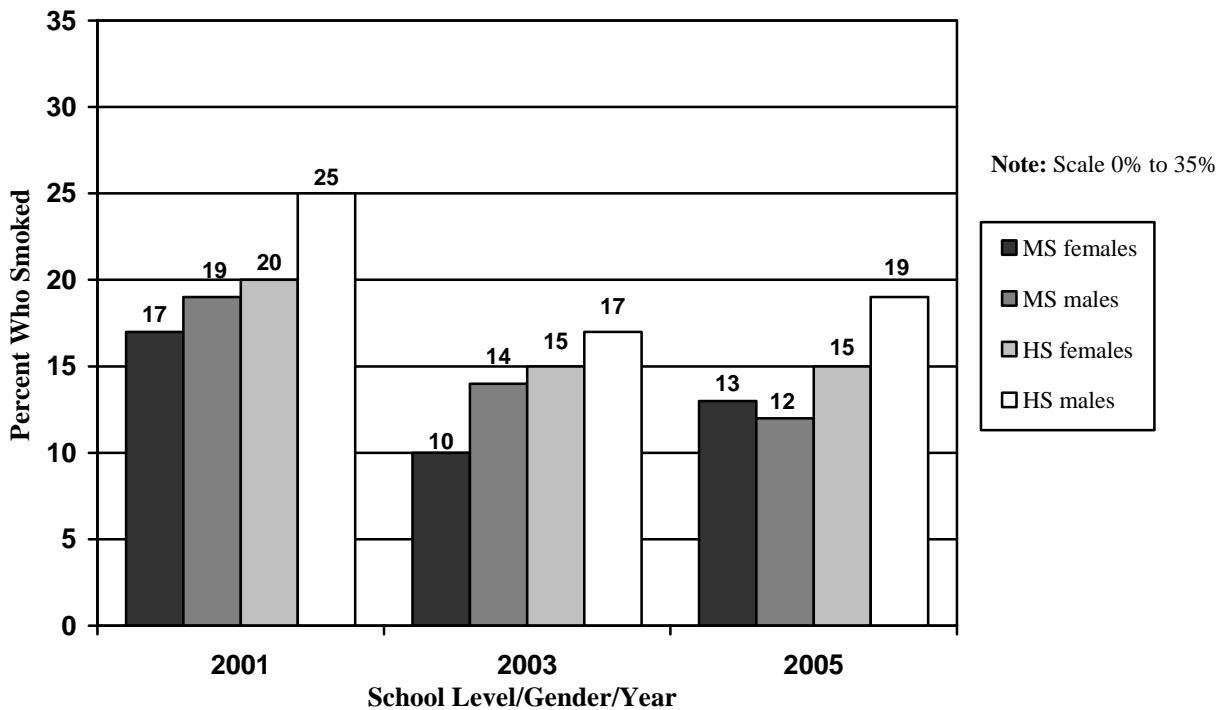
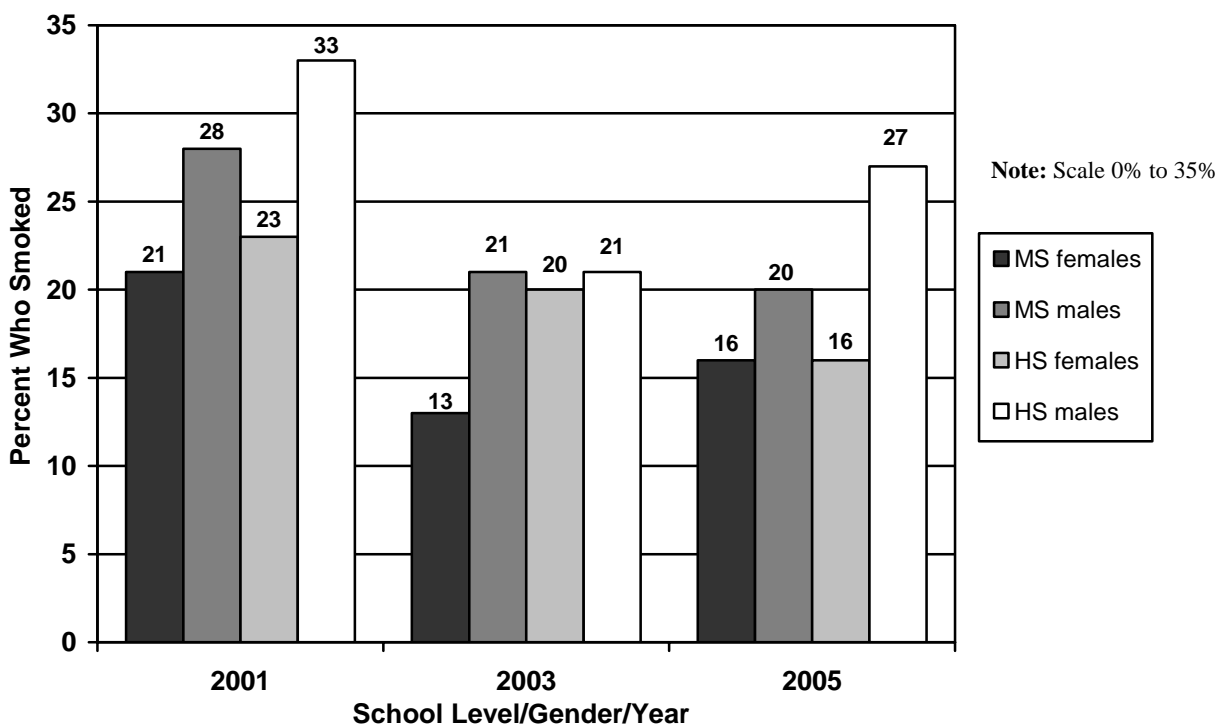


Figure 11: Initiation of Tobacco Use Before Age 13 by Gender, Level, and Year



Initiation of Any Tobacco Use Before Age 13 (Race)

In the 2003 data, Hispanic students were more likely to have smoked a whole cigarette before age 13 than were black or white students (Figure 12). Most recently, Hispanics saw opposite results by reporting decreased percentages of use of both cigarettes and cigars, and showing stable results for using chewing tobacco or snuff before age 13. In 2005, black students showed a slight increase in those students report initiating cigarette smoking before age 13, along with increases in chewing tobacco/snuff/dip and cigar/cigarillo use at that age (Figure 13). The percentage of white students to report initiating cigarette or cigar use before age 13 remained the same from 2003 to 2005, but the rate of using chewing tobacco or snuff at that age showed an increase from 3% to 7% in the same period.

Figure 12: Initiation of Smoking Before Age 13 by Race/Ethnicity and Year

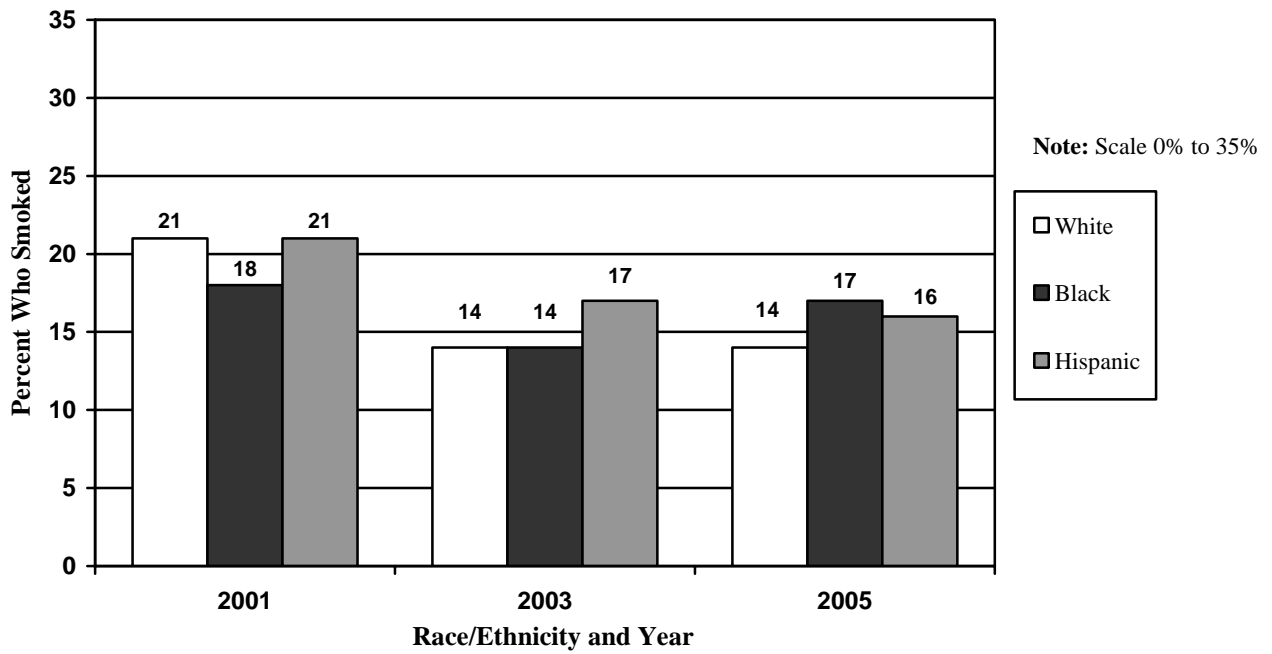
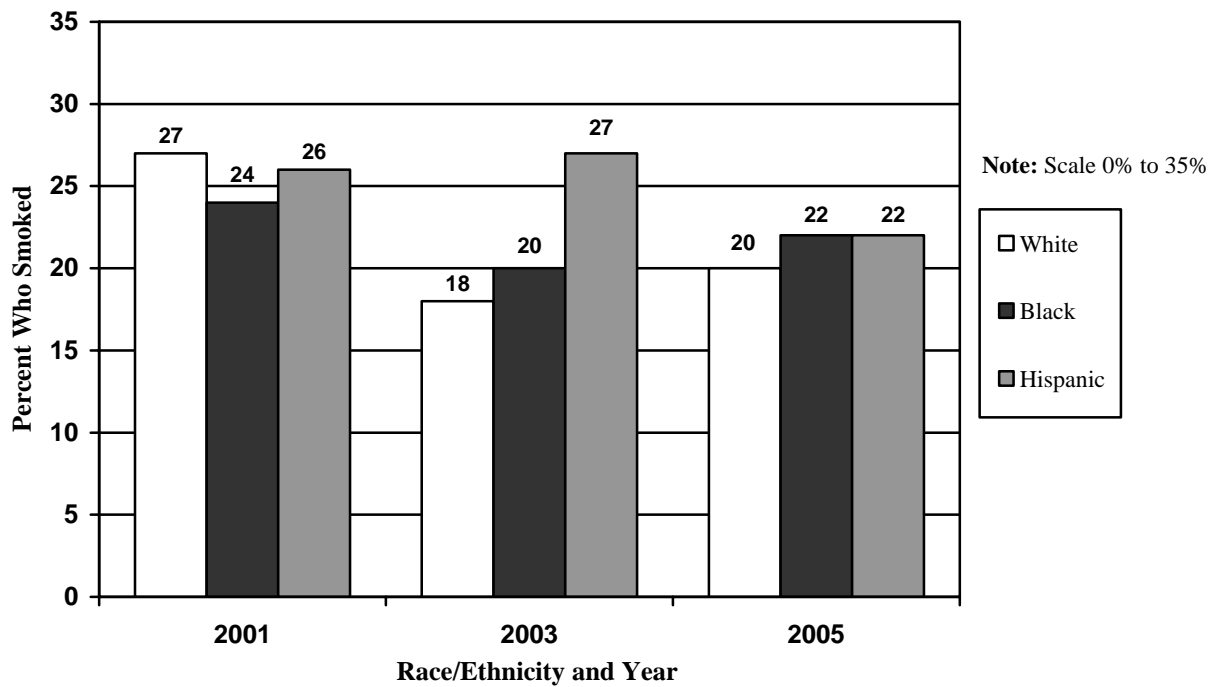


Figure 13: Initiation of Tobacco Use Before Age 13 by Race/Ethnicity and Year

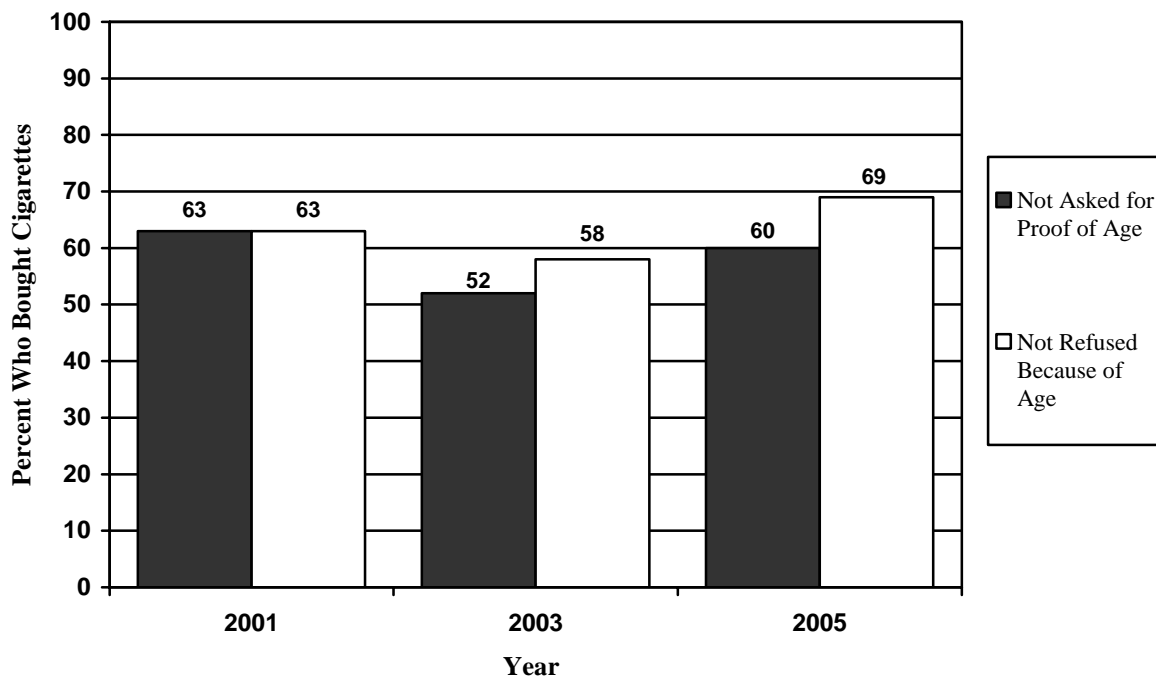


Proof of Age for Buying Cigarettes

More than half (60%) of currently smoking Virginia students who bought cigarettes in a store during the past month were not asked for proof of age (Figure 14). While middle school percentages remained the same, this 8% overall increase from 2003 to 2005 is a result of a higher percentage of high school respondents who were not asked for proof of age.

In 2005, 69% percent of students who bought cigarettes in a store during the past month were not refused because of their age. This percentage has increased in the last two years and is now at a higher level than reported in 2001 (63%). Seventy-eight percent of middle school students (from 59% in 2003) and 67% of high school students (from 58% in 2003) report they were not refused cigarettes in a store because of their age. The biggest increases in percentages from 2003 to 2005 for both of these surveys questions were found among white respondents.

Figure 14: Proof of Age for Buying Cigarettes by Year



Risk of Becoming an Established Smoker

Students who had tried cigarettes, but smoked less than 100 during their lifetimes were considered “experimenters.” Those who had both smoked 100 or more during their lifetimes and smoked on 1-19 of the past 30 days were classified as “non-daily current smokers.” Students were considered at high risk of becoming established smokers if they were either “experimenters” or “non-daily current smokers.”

The percentage of middle school students at a high risk for becoming established smokers increased slightly from 2003 to 2005, from 18% to 20% (Figure 15). The percentage of high school students at high risk of becoming established smokers declined in the same time period, falling from 41% to 38%. Female middle school students showed the largest growth in the percentage of those at high risk (from 16% to 21%); while male high school students showed the largest decline, reporting 37% in 2005 (down from 42% in 2003). Male middle school students and female high school students showed relatively stable responses from 2003 to 2005.

In 2005, similar to previous survey results, Virginia Hispanic students (47%) were more likely than black (42%) or white (25%) students to be at a high risk of becoming established smokers (Figure 16). Since 2003, the percentage of both Hispanic (45% to 47%) and black students (37% to 42%) at high risk has risen, while the percentage of white students at high risk decreased (28% to 25%).

Figure 15: Risk of Becoming an Established Smoker by Level and Year

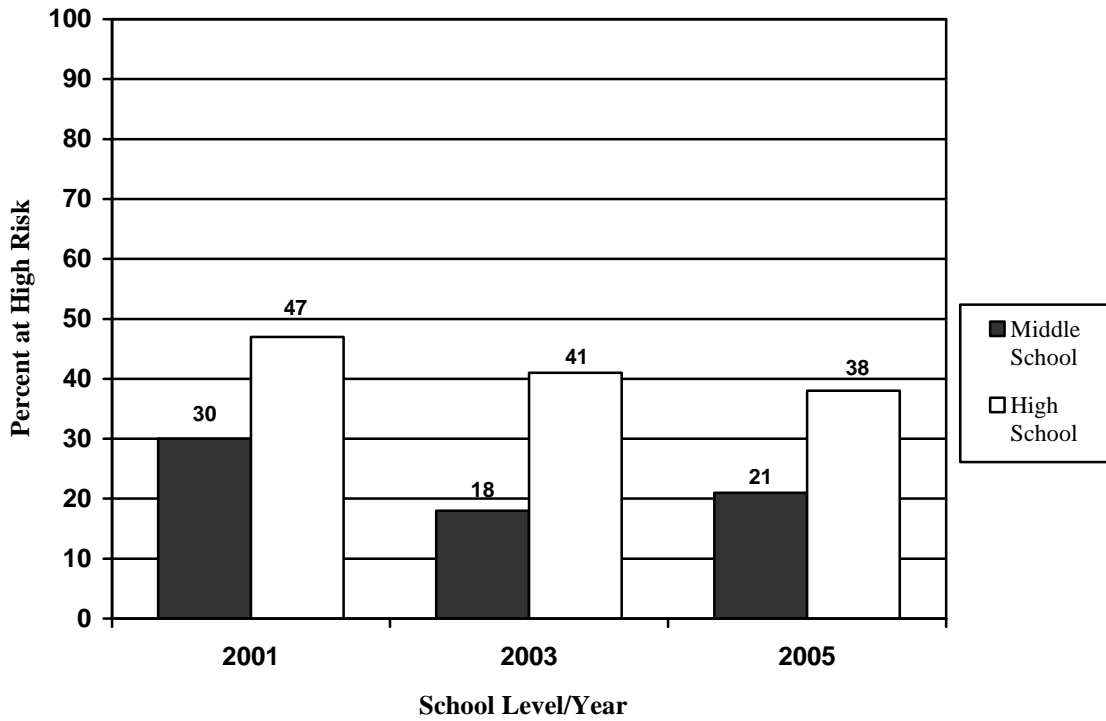
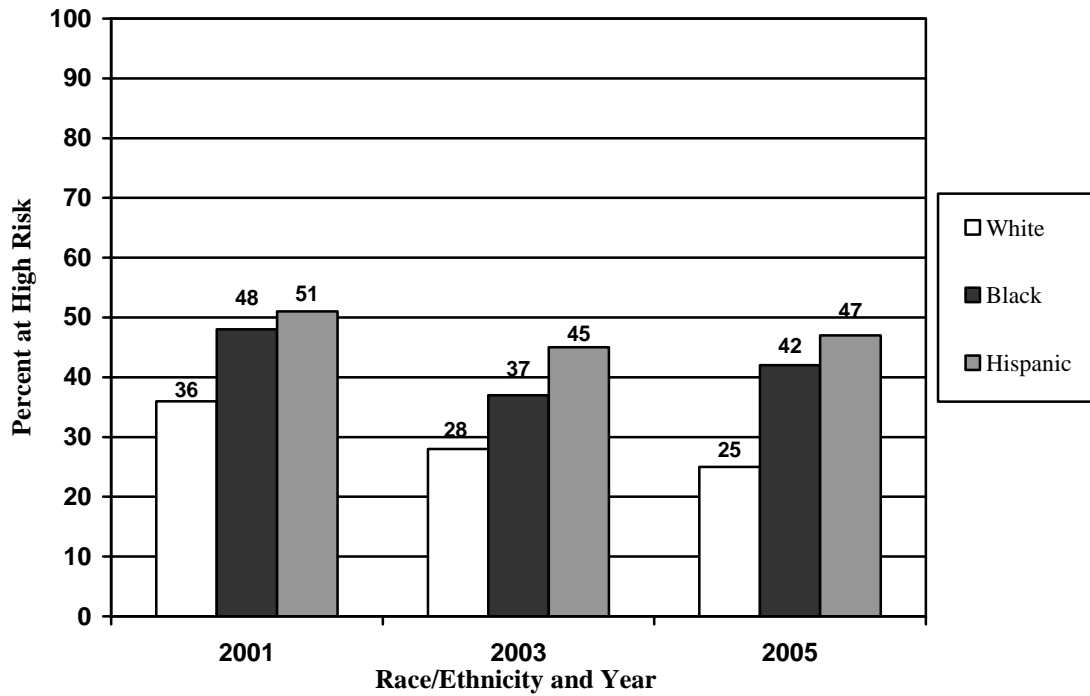


Figure 16: Risk of Becoming an Established Smoker by Race and Year



Desire to Quit Smoking Cigarettes

The percentage of both current middle school and high school cigarette smokers who want to quit smoking declined between 2003 and 2005. Decreases were seen in the percentages of current smokers who want to quit in the female middle and high school populations and male high school populations (Figure 17). The percentage of current male smokers in middle school who want to quit smoking increased by five percentage points between 2003 and 2005. The percentage of black current smokers who want to quit smoking decreased from 47% to 41% between 2003 and 2005. This decline was larger for white students, with responses indicating 37% of white current smokers want to quit (down from 59% in 2003). The percentage of Hispanic current smokers who want to quit smoking rose considerably from 34% in 2003 to 58% most recently (Figure 18).

Figure 17: Desire to Quit Cigarette Smoking by Gender, Level and Year

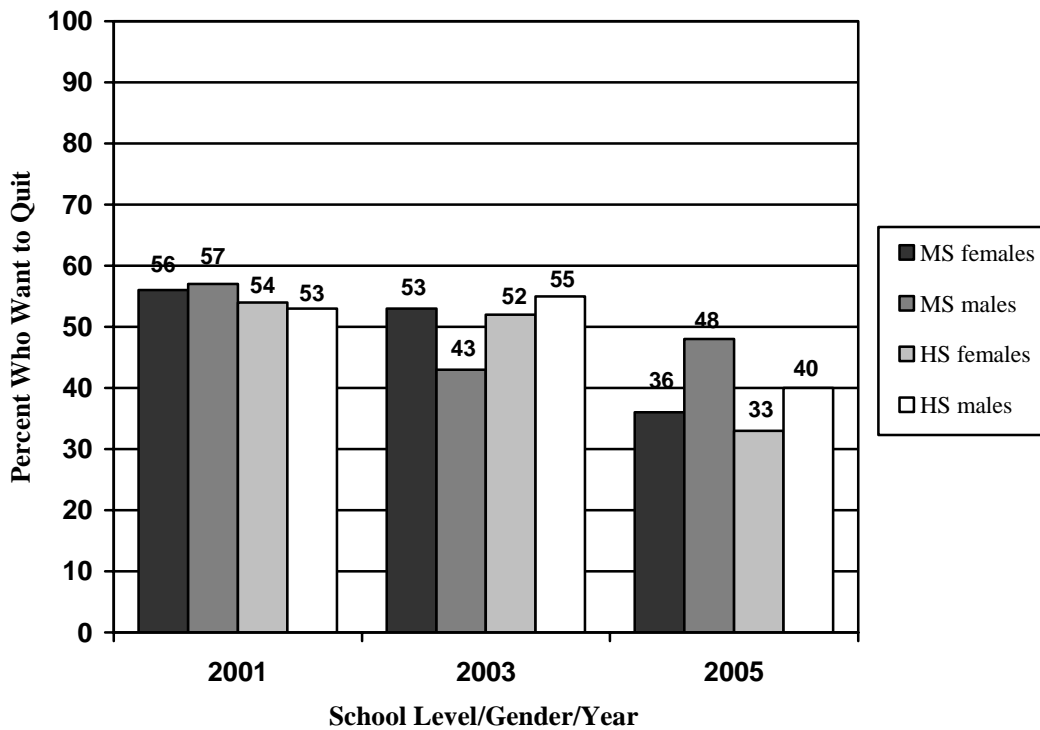
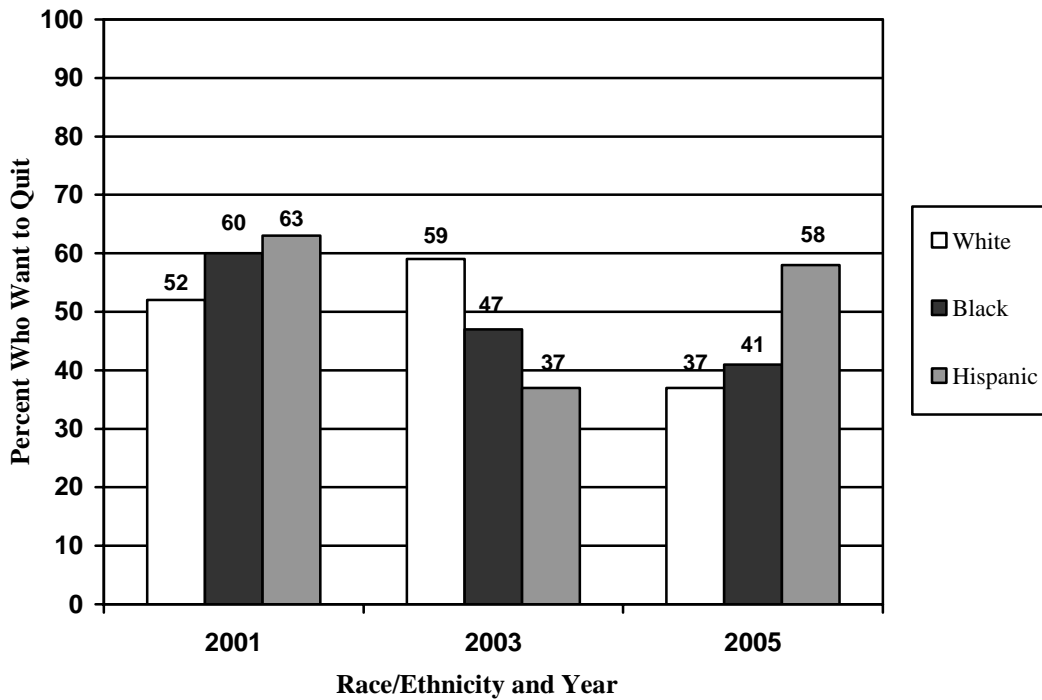


Figure 18: Desire to Quit Cigarette Smoking by Race/Ethnicity and Year



Attempts to Quit Smoking Cigarettes

The percentage of current smokers who tried to quit smoking cigarettes declined from 2003 to 2005, from 62% to 49%. Females in both middle school and high school were more likely than their male counterparts to have tried to quit smoking in the past year (Figure 19). The percentage of middle school males who tried to quit smoking remained stable, while the percentage of high school males who tried to quit declined by 20 percentage points.

Half of all current smokers reported trying to quit smoking in the past year, with no differences in percentages noted among races/ethnicities. For both black and white students, these percentages were less than those reported in the 2003 survey results (Figure 20). The percentage of Hispanic students trying to quit, however, increased from 44% to 50% in the two years between YTS survey administrations.

Figure 19: Attempt to Quit Cigarette Smoking by Gender, Level, and Year

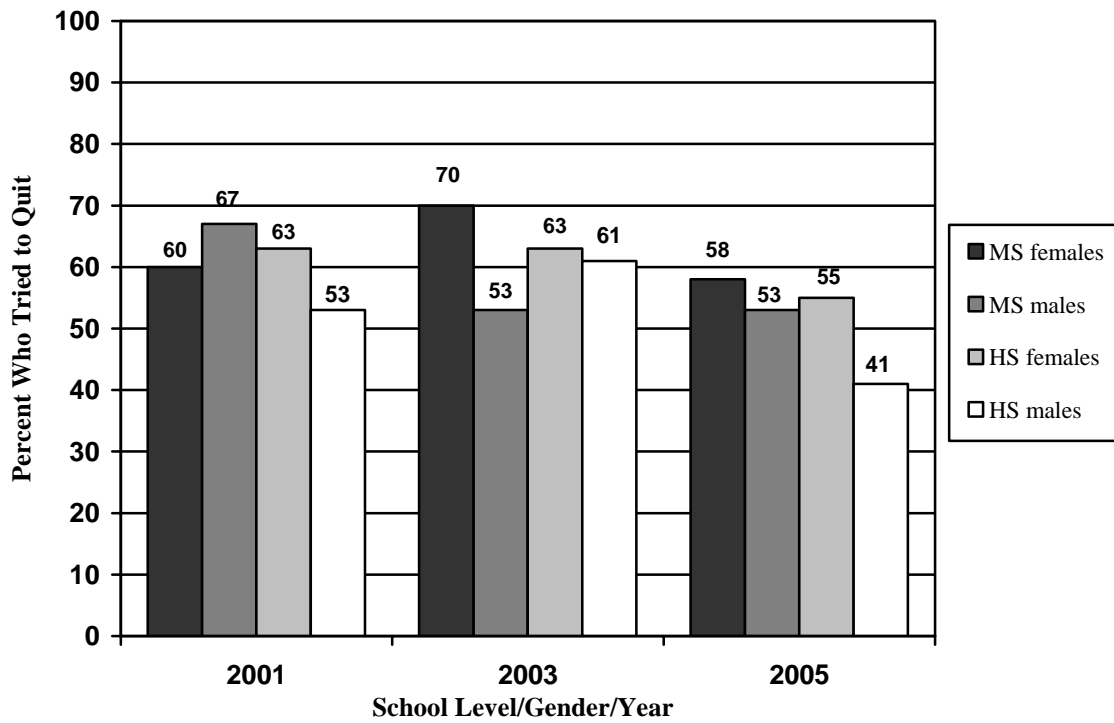
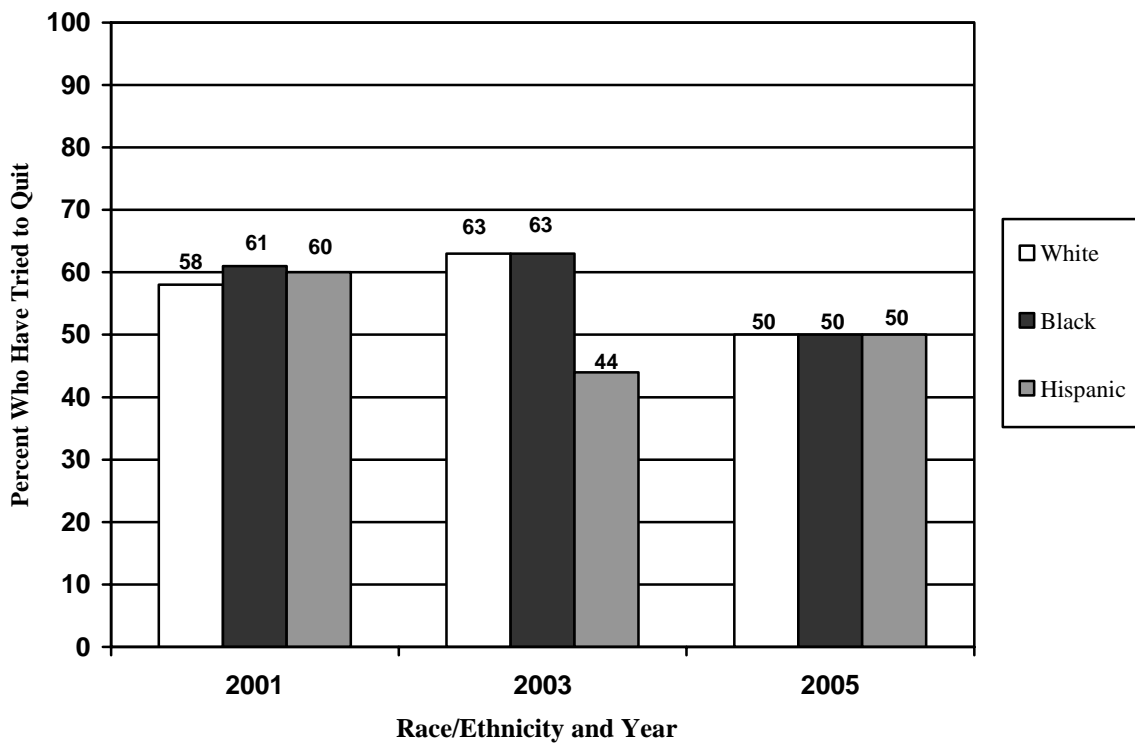


Figure 20: Attempt to Quit Cigarette Smoking by Race/Ethnicity and Year

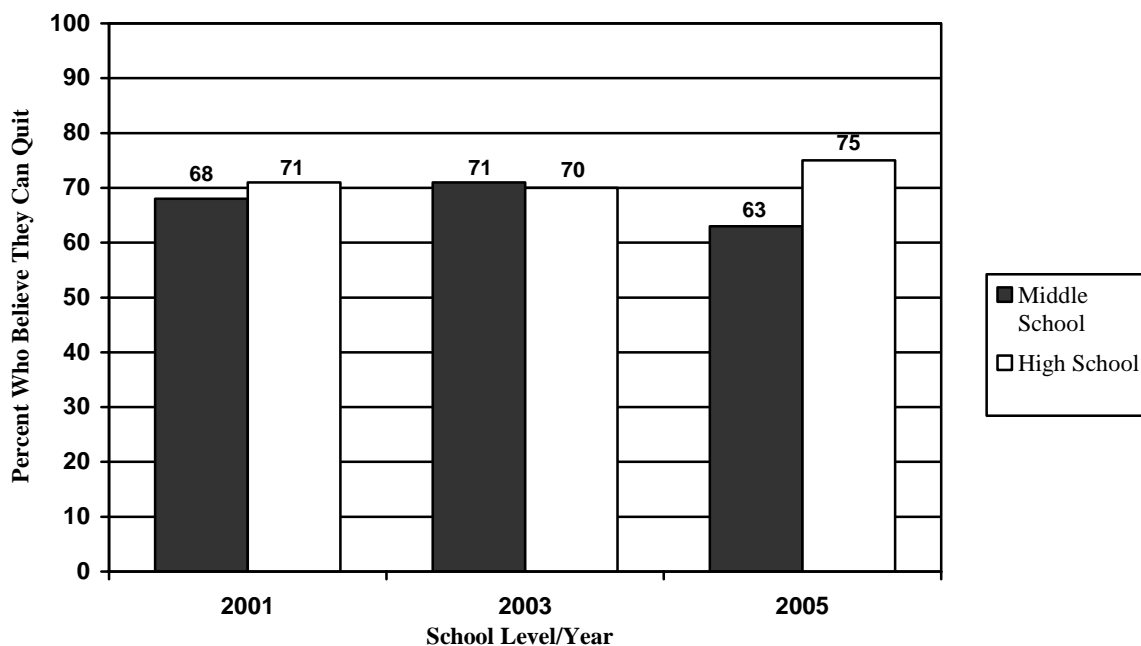


Belief in the Ability to Quit Smoking

From 2003 to 2005, the percentage of current smokers in middle school who believed they would be able to quit smoking now if they wanted to declined from 71% to 63% (Figure 21). In this same time frame, the percentage of high school current smokers who believed they could quit smoking increased (from 70% to 75%). These results were similar across gender – both male and female middle school smokers were less likely to believe they would be able to stop smoking now if they wanted to than in 2003; while high school students of both genders were more likely to report believing they could quit smoking in 2005.

The percentage of white students believing they could quit remained relatively steady since 2003; while smaller percentages of both black and Hispanic students reported thinking they could quit smoking if they wanted to. Hispanics showed the most significant change on this measure, with 64% reporting they would be able to quit in 2005 compared to 82% in 2003.

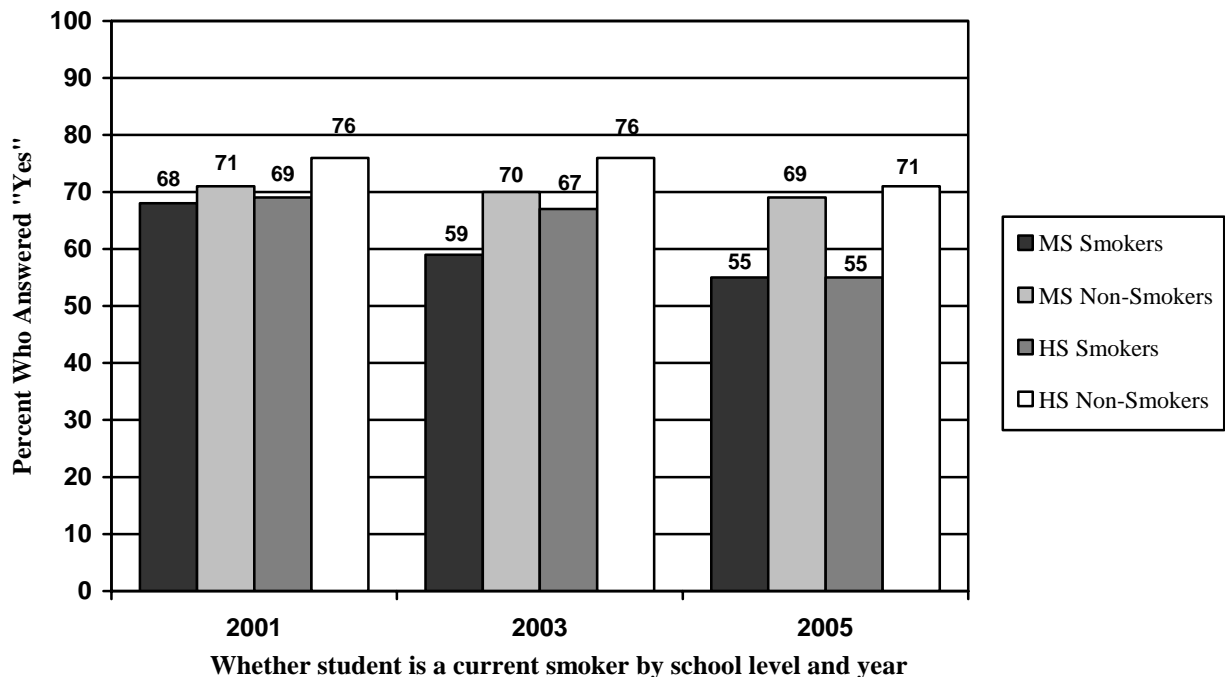
Figure 21: Belief in the Ability to Quit Smoking by Smoking Status, Level, and Year



Belief in Tobacco Addiction

In 2005, as in 2001 and 2003, non-smoking students were more likely than smoking students to believe that young people can definitely get addicted to tobacco just like they can get addicted to using cocaine or heroin (Figure 22). The percentage of students (both smokers and non-smokers) who believed this fell between 2003 and 2005. Sixty-seven percent of middle school students and 68% of high school students from the 2005 study (down from 70% and 74% in 2003) believe young people can definitely get addicted, with females more likely to believe this at both school levels.

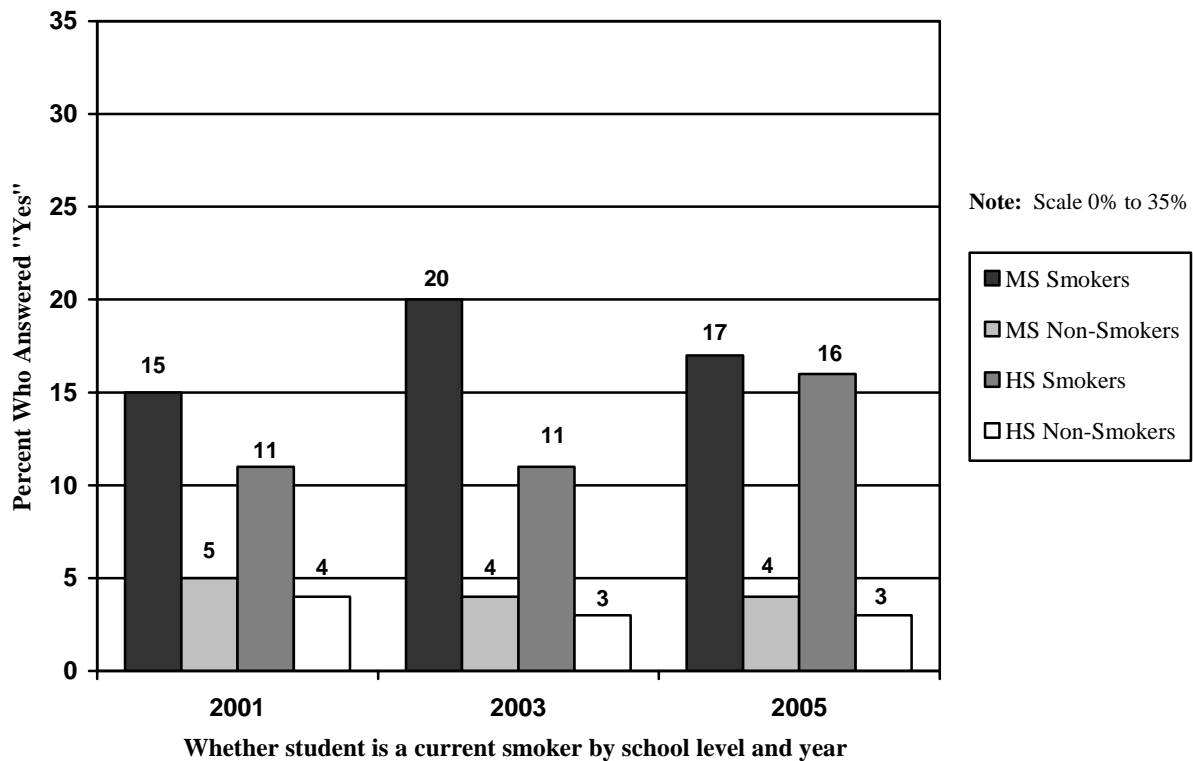
Figure 22: Belief in Tobacco Addiction by Smoking Status, Level, and Year



Belief that Smokers Have More Friends

In both 2003 and 2005, relatively few students believed that young people who smoke cigarettes definitely have more friends (Figure 23). Students who currently smoke were more likely than non-smoking students to believe this. Between 2003 and 2005, the percentage of middle school smokers who believed this decreased from 20% to 17%, but the percentage of high school smokers with this belief increased from 11% to 16%. Black and Hispanic males in high school were more likely than their white counterparts to believe that individuals who smoked had more friends.

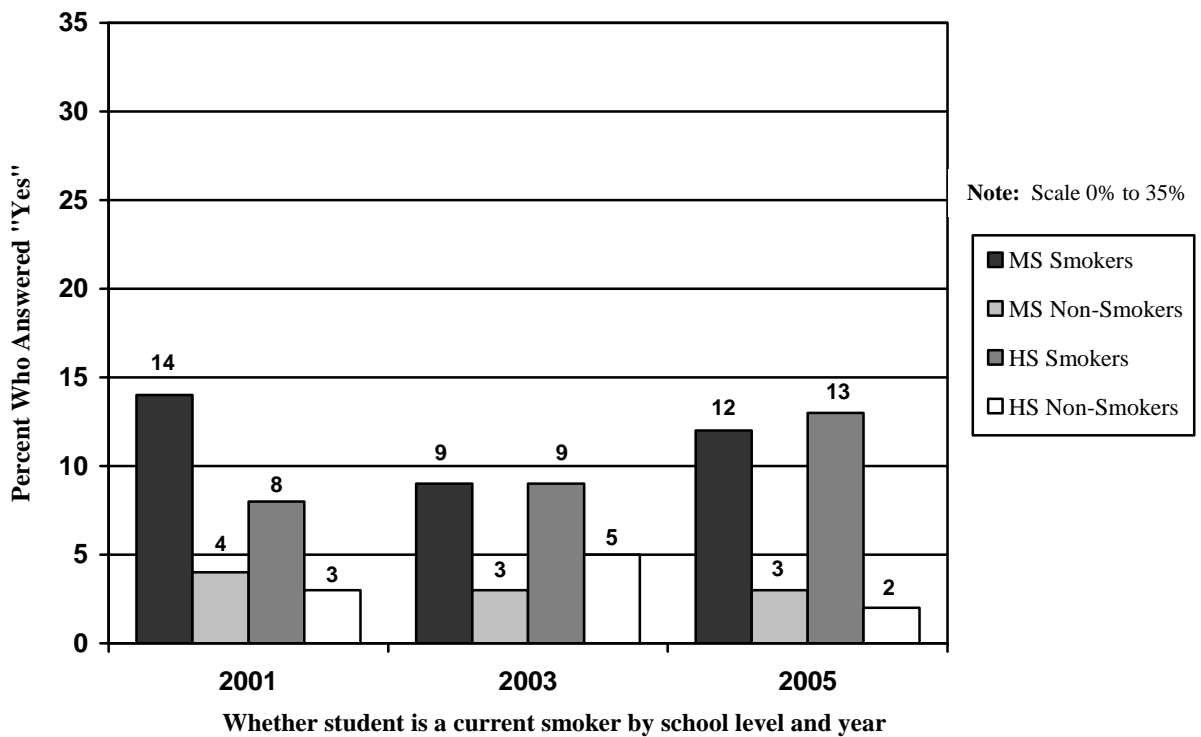
Figure 23: Belief in Smokers Having More Friends by Smoking Status, Level, and Year



Belief That Smoking Cigarettes Makes People Look Cool or Fit In

In both 2003 and 2005, currently smoking students were more likely than non-smoking students to believe that smoking cigarettes definitely makes young people fit in or look cool. Again however, in both years, relatively few students believed this (Figure 24). The percentage of smokers in both middle and high school who believed that smoking definitely makes young people look cool increased in the past two years; but non-smokers in middle school remained close to their 2003 percentages, while the percentage of non-smokers in high school who believed this decreased from 5% to 2%. Additionally, white and Hispanic students in 2005 were more likely than in 2003 to think that smoking definitely makes young people fit in or look cool, the percentage of black students that believed this decreased 8% to 5% from 2003 to 2005.

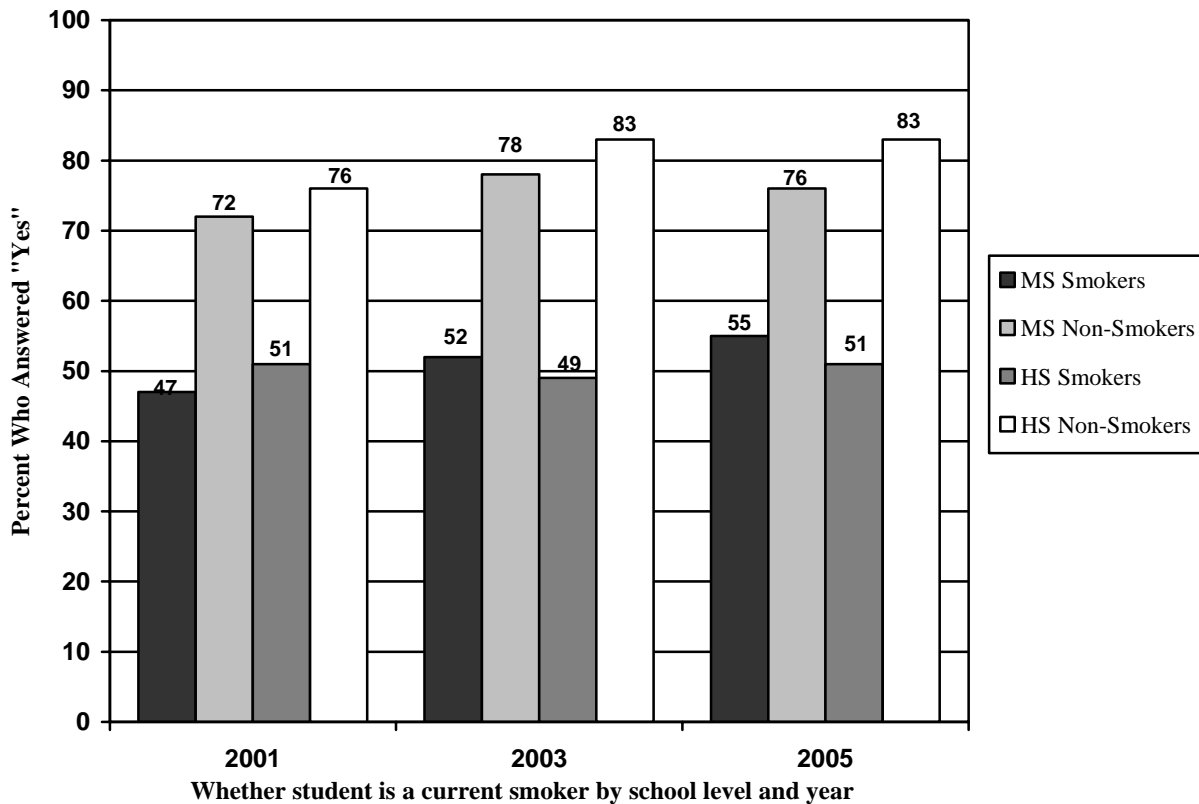
Figure 24: Belief in Smokers Looking Cool by Smoking Status, Level, and Year



Belief That it is Harmful to Smoke 1-5 Cigarettes Daily

Non-smoking students were more likely than smokers to believe that young people definitely risk harm from smoking 1 to 5 cigarettes per day in 2005 (Figure 25). The percentage of middle school smokers and high school smokers who believed this rose slightly between 2003 and 2005, while middle school non-smokers who believed this fell slightly and high school non-smokers changed very little. Females at both middle and high school levels were more likely than males to believe that young people risk harming themselves from smoking 1 to 5 cigarettes per day. Hispanic and white students were more likely to report believing this than black respondents.

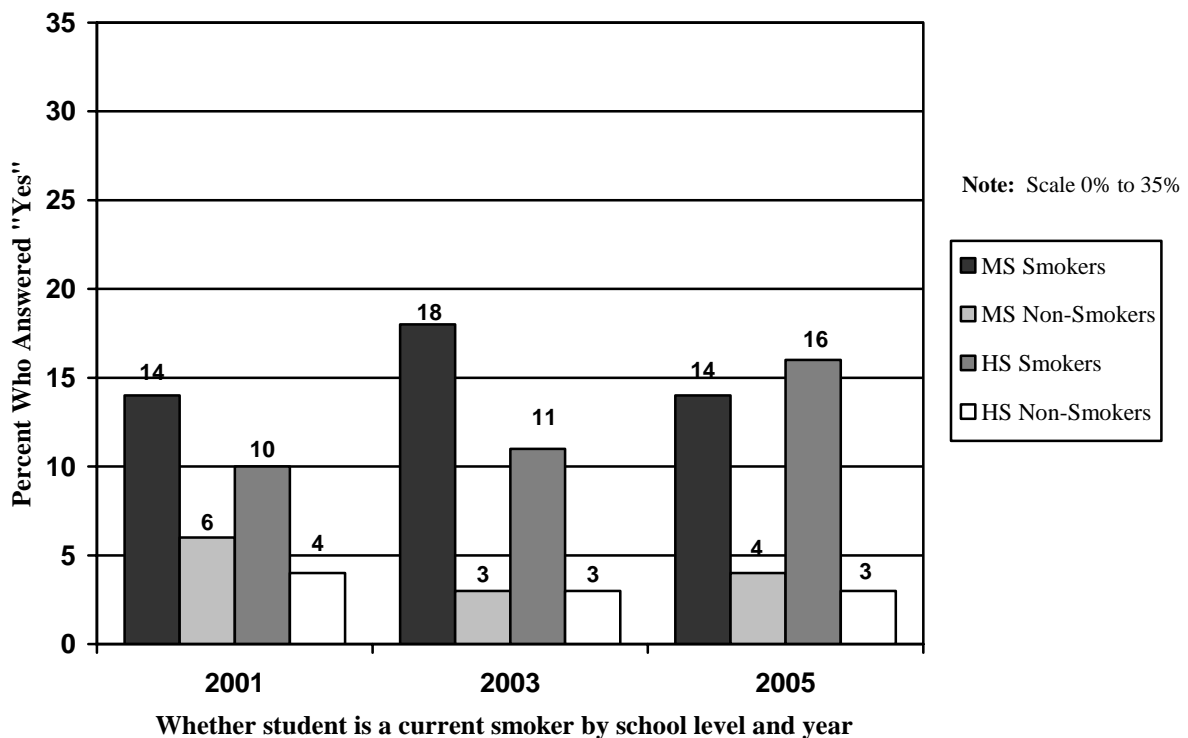
Figure 25: Belief Smoking is Harmful by Smoking Status, Level, and Year



Belief that it is Safe to Smoke for Only a Year or Two

During the years the YTS has been conducted in Virginia, relatively few students believed that smoking cigarettes for a year or two is definitely safe as long as you quit after that (Figure 26). Currently smoking students appeared more likely than non-smoking students to believe this. In 2005, 14% of middle school smokers believed this (down from 18% in 2003) and 16% of high school smokers believed this (up from 11% in 2003). Non-smokers views remained relatively stable. Male non-Caucasian students were most likely to agree with this statement.

Figure 26: Belief in Safety of Short Smoking Period by Smoking Status, Level, and Year



Belief that Environmental Smoke is Harmful

In both 2003 and 2005 current smokers were less likely to believe that second-hand smoke was definitely harmful to them than current non-smokers (Figure 27). In 2005, current smokers in both middle and high school were slightly less likely to believe that other peoples smoke was harmful to them than in 2003. There was relatively little change in percentages across years for non-smokers at either school level. The percentage of female high school students who believed this increased in the past two years from 72% to 75%, while the percentage of male high school students with this belief decreased from 67% to 63% (Figure 28). Middle school views remained relatively steady from 2003 to 2005.

Figure 27: Belief in Environmental Smoke Harm by Smoking Status, Level, and Year

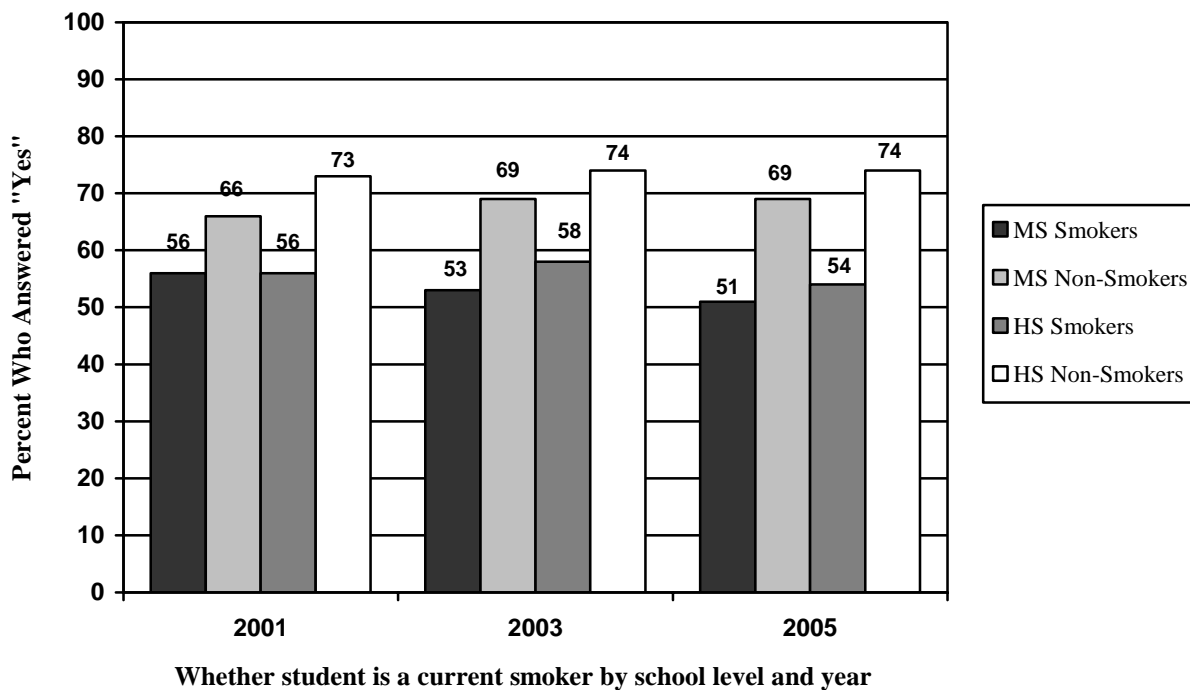
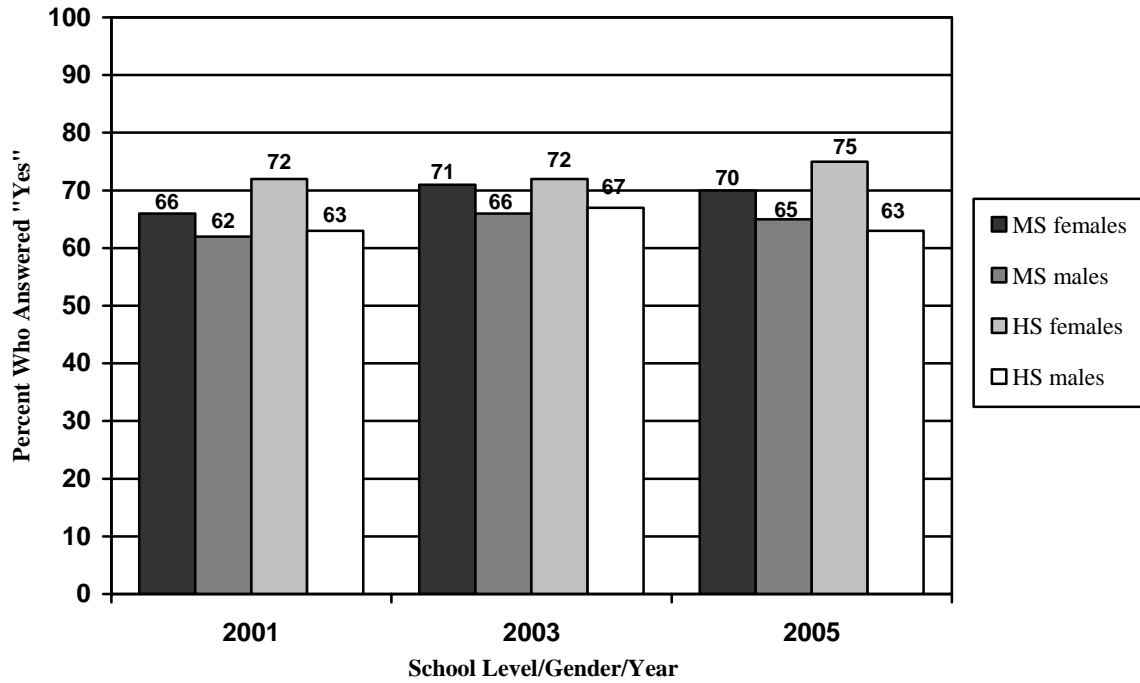


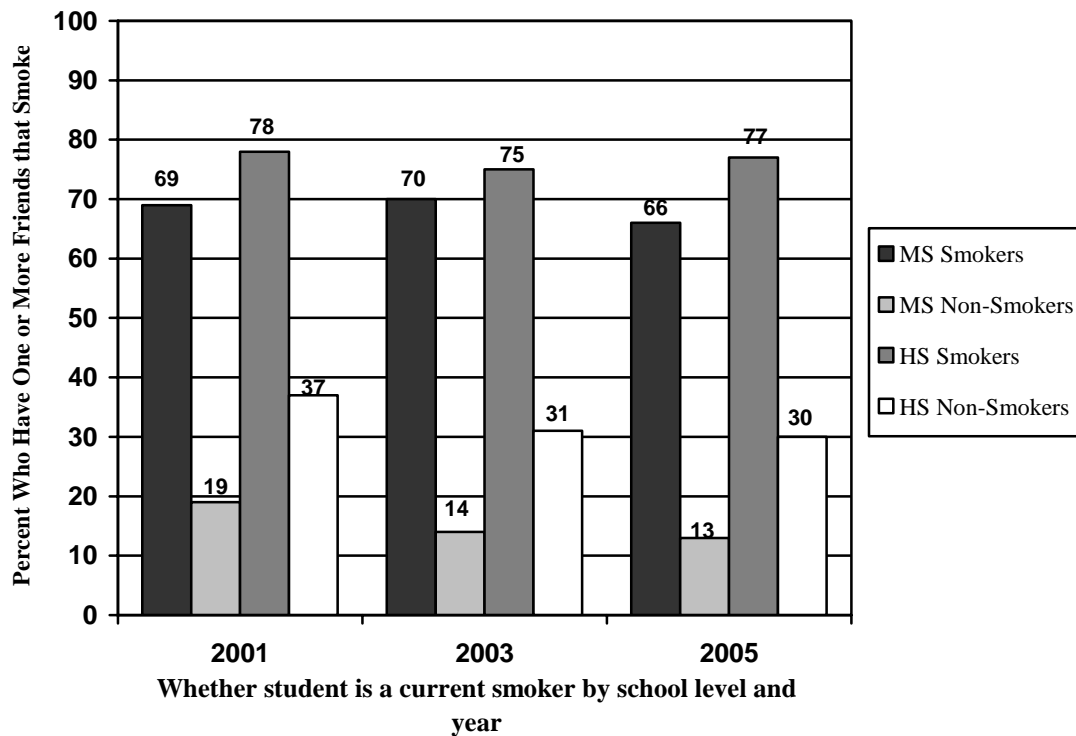
Figure 28: Belief in Environmental Smoke Harm by Gender, Level, and Year



One or More Friends Who Smoke Cigarettes

Students were asked to respond as to how many of their four closest friends smoked cigarettes (Figure 29). In 2005, the most popular answer by non-smokers was that “none” of their closest friends smoked, while the most popular answer for smokers was that “four” out of their four closest friends smoked cigarettes. This is the case across both middle and high school respondents.

Figure 29: Friends Smoking by Smoking Status, Level, and Year⁵

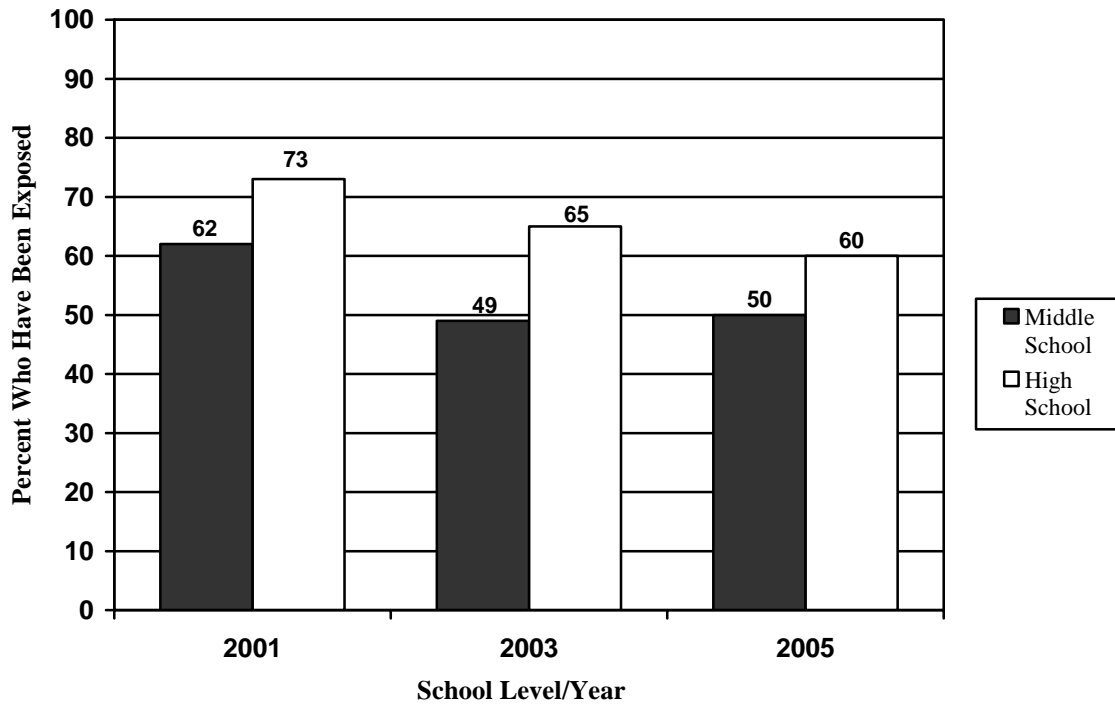


Exposure to Environmental Smoke in the Past Week

The number of high school students who were exposed to second-hand smoke in a car or room within the past week declined from 2003 to 2005, while middle school percentages showed little change (Figure 30). High school females showed the greatest decrease, falling from 68% to 60% in 2005. As in 2001 and 2003, Hispanic students were least likely to be exposed to second-hand smoke and white students were most likely to be exposed.

⁵ Note: the percentages for 2001 and 2003 are different from those presented in the 2003 YTS report due to a different method of analysis used. Unlike those in the 2003 report, the percentages presented above do not include students that responded “not sure” to this question.

Figure 30: Exposure to Environmental Smoke by Level and Year



Living With a Smoker

The percentage of high school students who currently live with a smoker fell from 37% to 35% between 2003 and 2005, while the percentage of middle school students currently living with a smoker grew from 36% to 43% (Figure 31). When examined by gender, this finding held: both middle school males and females reported higher rates of living with smokers, while male and female high school students both showed decreases. Black and Hispanic students reported lower percentages of those currently living in a house with a current smoker than in 2003 (Figure 32). Black student rates fell from 45% to 40% and Hispanic student percentages declined from 38% to 34%. Conversely, the percentage of white students who reported living with a smoker increased to 38% in 2005 (from 33% in 2003).

Figure 31: Living with a Smoker by Level and Year

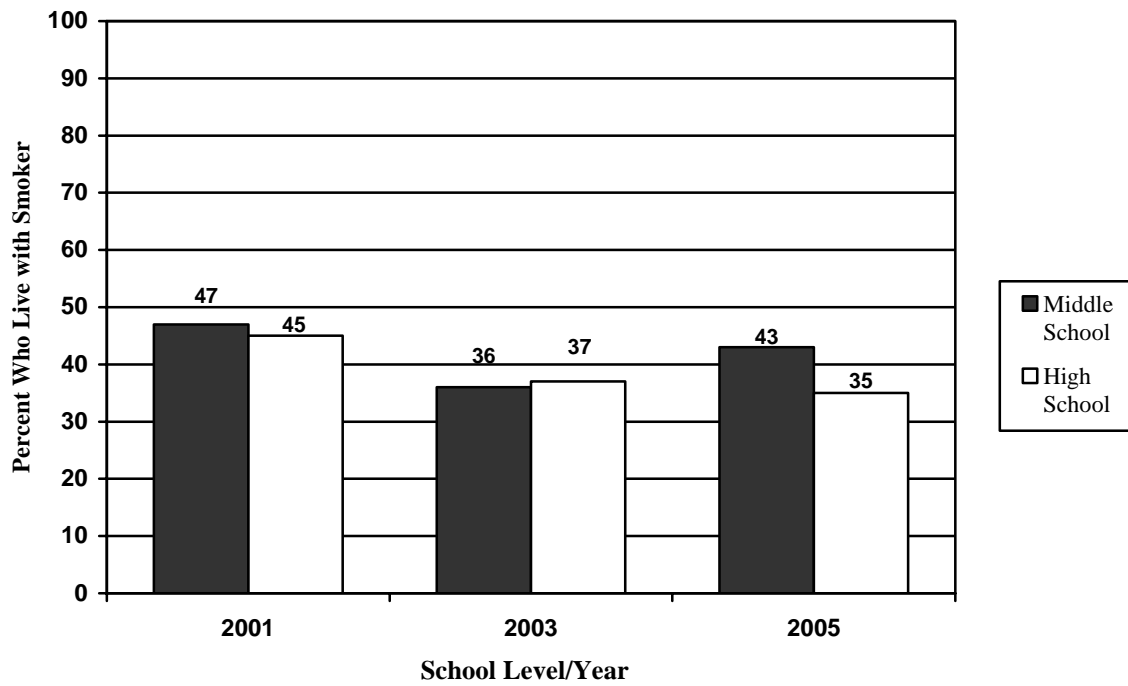
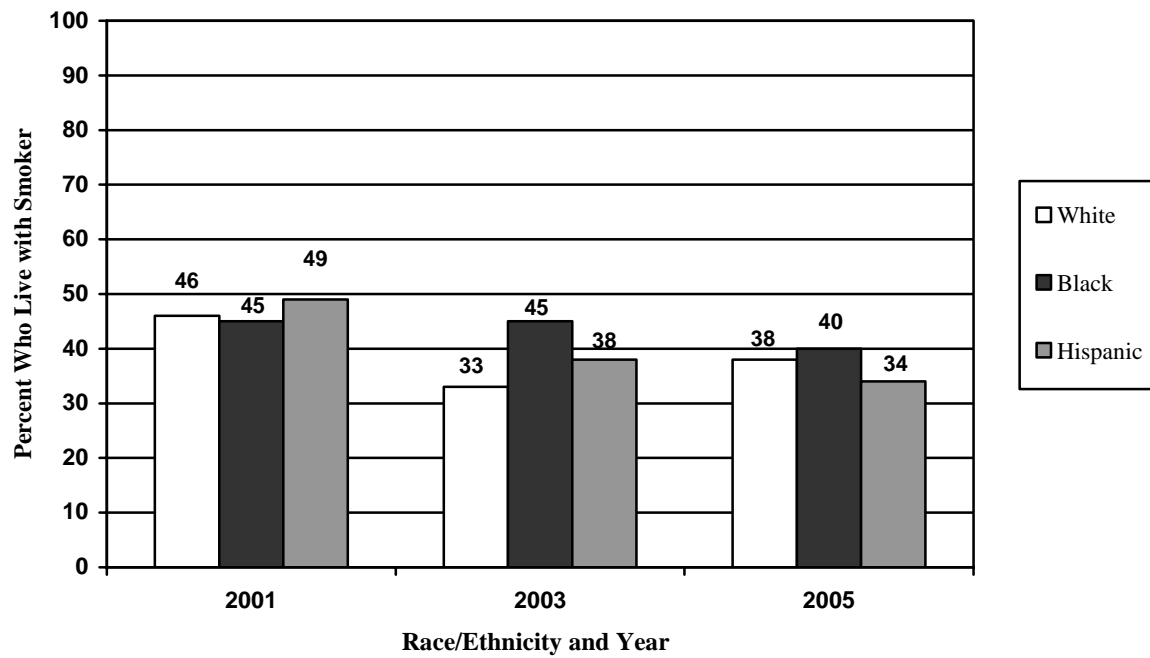


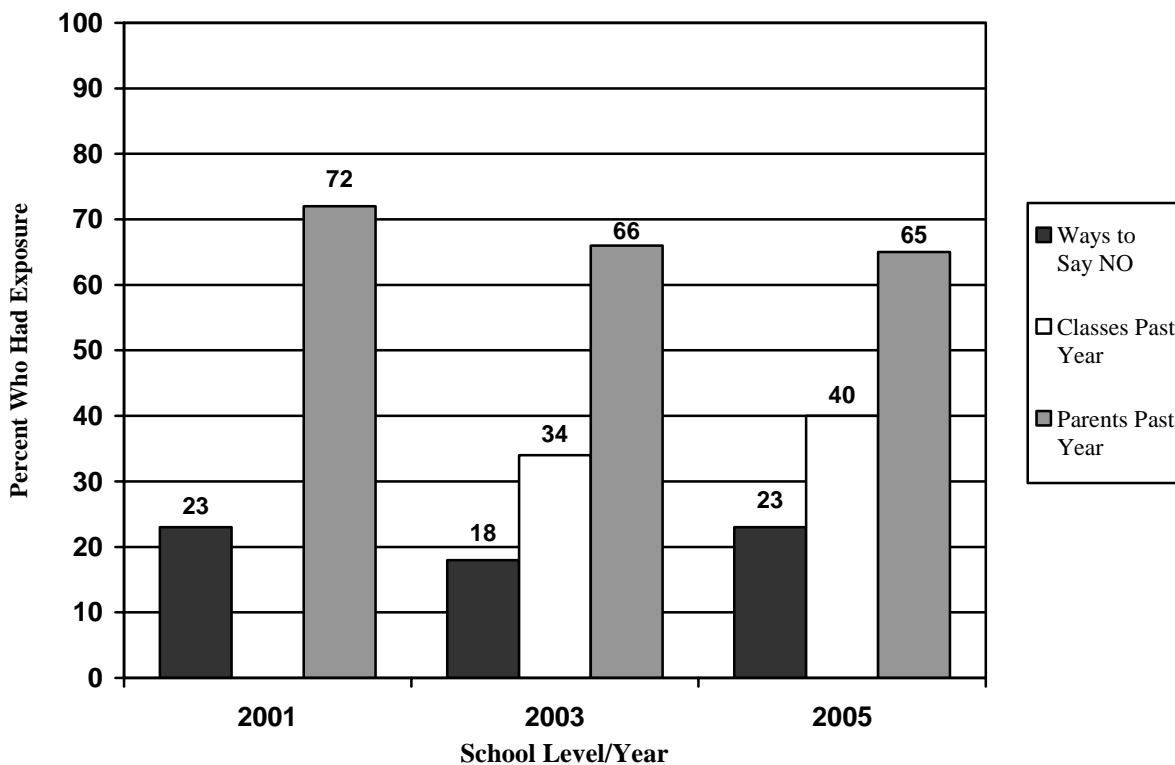
Figure 32: Living with a Smoker by Race/Ethnicity and Year



Exposure to Pro-Health Messages

The percentage of students who practiced ways to say no to tobacco increased from 18% to 23% between 2003 and 2005 (Figure 33). Forty percent (up from 34% in 2003) of students in 2005 (46% of middle school students and 35% of high school students) were taught about the dangers of tobacco use in classes during the school year.⁶ White students were found to have the lowest percentage of positive responses to both of these questions. In 2005, 65% of students reported having discussed the dangers of tobacco use with one or more of their parents during the past year.

Figure 33: Exposure to Pro-Health Messages by Year



⁶ It should be noted that this survey was administered at the start of the school year; therefore the way the question was worded “in this school year” implies “in the past 1-2 months of instruction. The question about parental discussions stated within the past 12 months.

Use of Tobacco Company Items

The percentage of students who bought or received items with tobacco company names or logos increased from 2003 to 2005. This increase was especially seen in middle school rates, where percentages grew from 11% to 16%; high school students reported an increase from 18% to 20% (Figure 34). This increase was found to be more profound for males, who reported increased rates of 11% to 18% in middle school and 20% to 23% in high school.

All three racial/ethnic groups saw higher percentages of those students who reported buying or receiving items with tobacco names and logos than in 2003 (Figure 35). In 2005, Hispanic students were most likely to report this. However, both black and white students reported greater increases in the past two years than Hispanic students in the percentage of students who bought or received these items.

Figure 34: Use of Tobacco Company Items by Level and Year

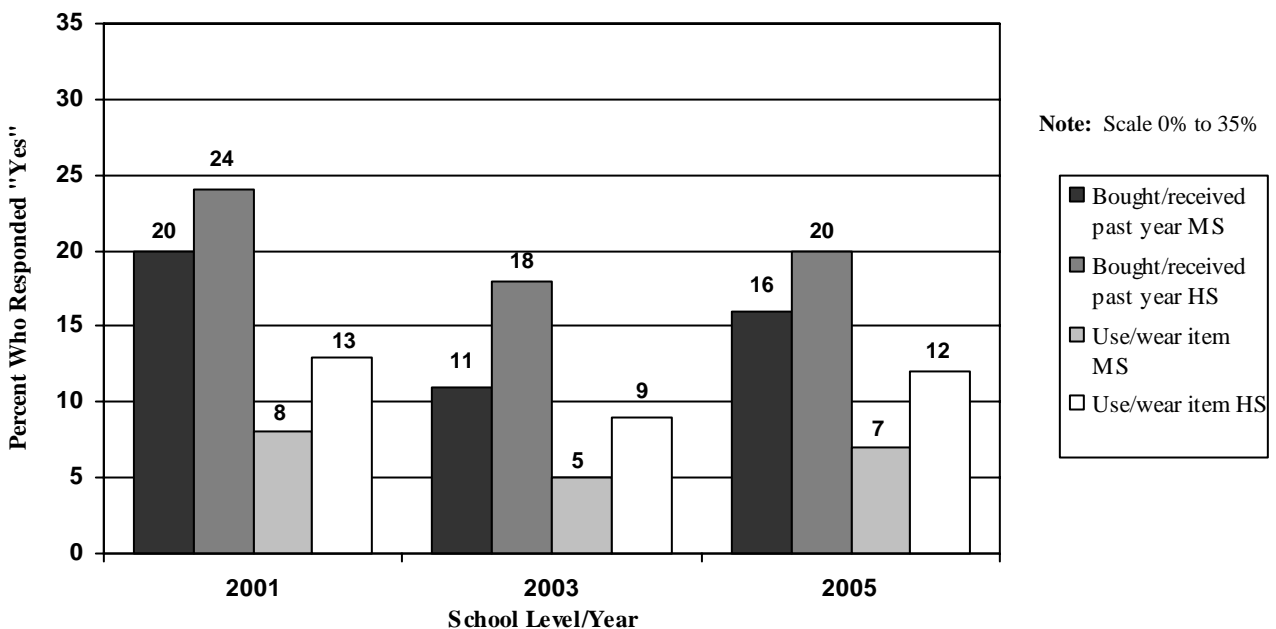
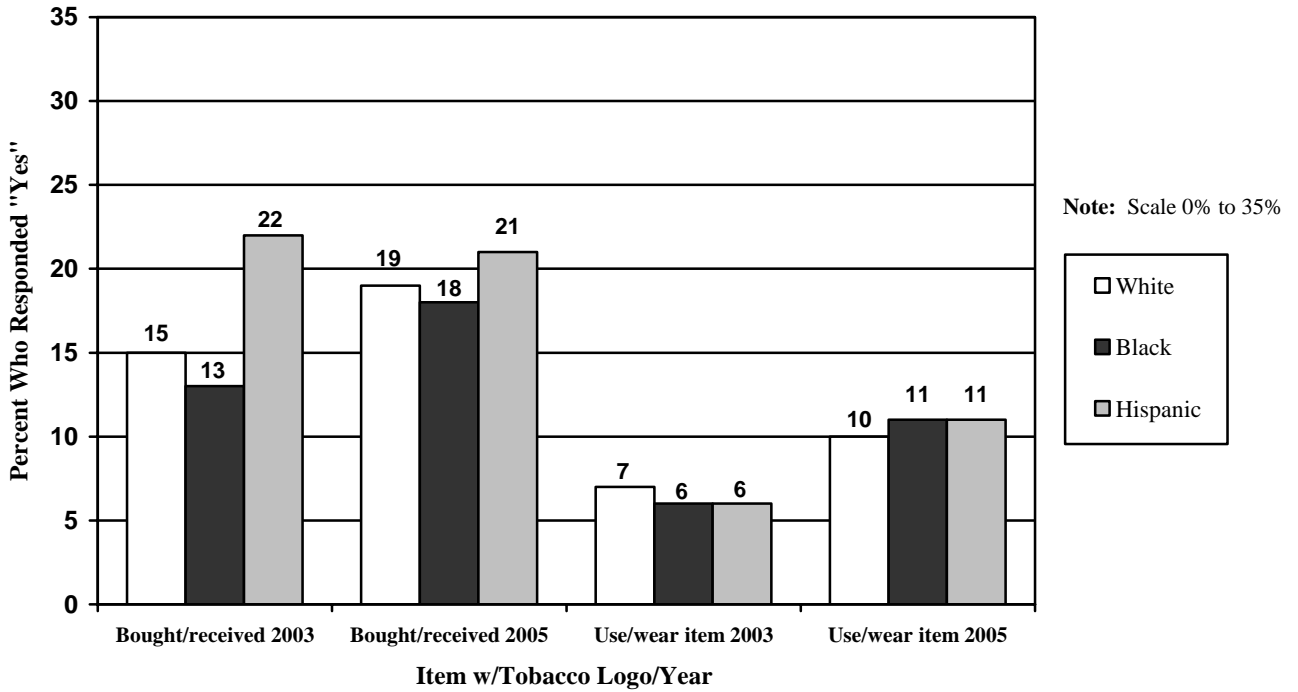


Figure 35: Use of Tobacco Company Items by Race/Ethnicity and Year



Questions Added to the 2005 YTS Survey

Belief of Who Sets the Standard for “Cool”

There were several questions that were added to the YTS survey for 2005. As an addition to the 2005 YTS survey, students were asked “who sets the standard for what is considered cool?” A similar majority of students (61%) at both the middle and high school level agreed that boys set this standard.

Belief that it is OK for Youth to Try Smoking

Several of the added questions this year asked students to respond to statements about how they felt regarding attitudes toward smoking. In response to whether students believed that it was ok for youth to try smoking, 11% of middle school students and 27% of high school students responded in the affirmative. When separated by gender, males at both the middle school and high school levels were more likely to respond that it was ok for youth to try smoking (see Figure 36). Black students were least likely to agree with this statement (see Figure 37).

Figure 36: Believe it is OK to Try Smoking by Gender, Level, and Year

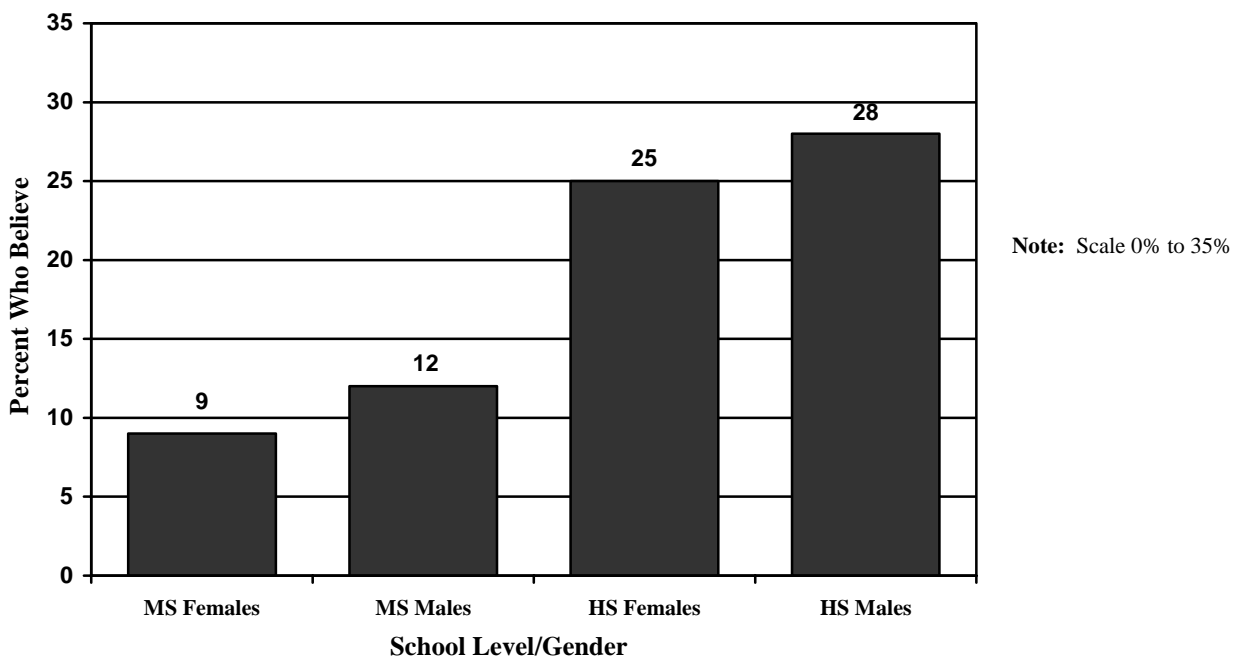
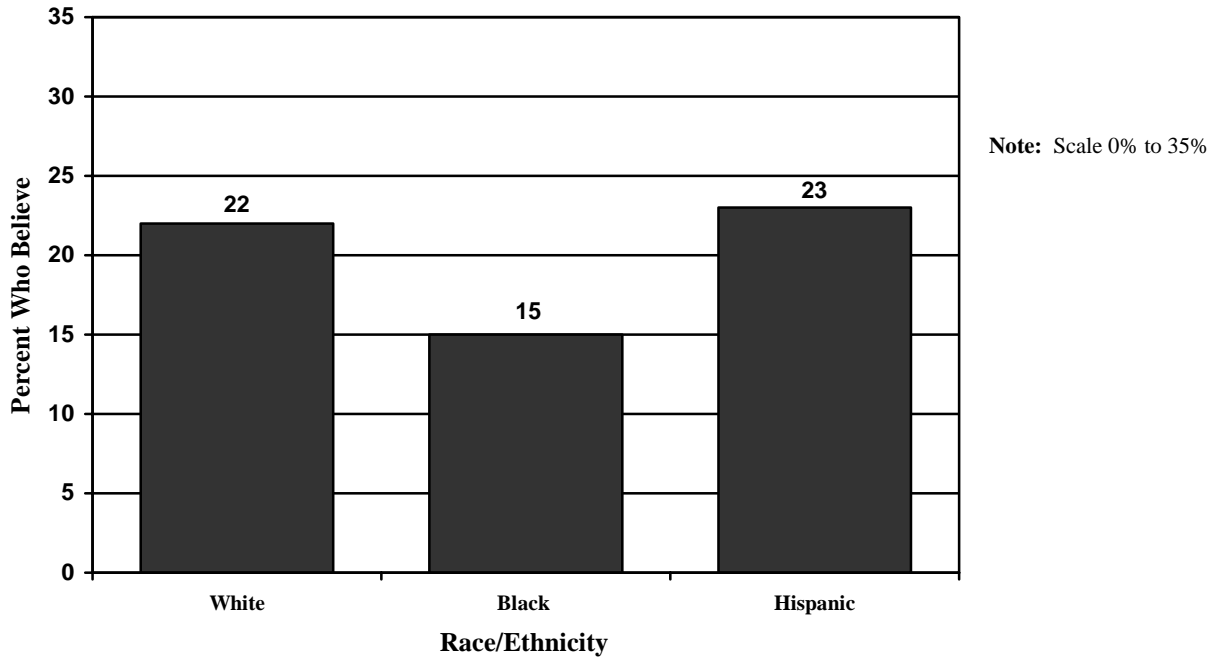


Figure 37: Believe it is OK to Try Smoking by Race/Ethnicity and Year



Belief that Smokers Should be Able to Smoke Where and When They Want

Students participating in the 2005 YTS survey were also asked if smokers should be able to smoke where and when they want. Older students seemed to agree with this statement more often, with 22% of high school students responding affirmatively versus 14% of middle school students. Female students were less likely to agree with this statement. Only 11% of middle school females and 13% of high school females responded that smokers should be able to smoke where and when they want, versus 17% and 31% of males respectively (Figure 38). Black students were most likely to agree with this statement and Hispanic students were least likely to agree, though all races/ethnicities showed similar percentages of agreement (Figure 39).

Figure 38: Believe Smokers Can Smoke Where/When They Want by Gender and Level

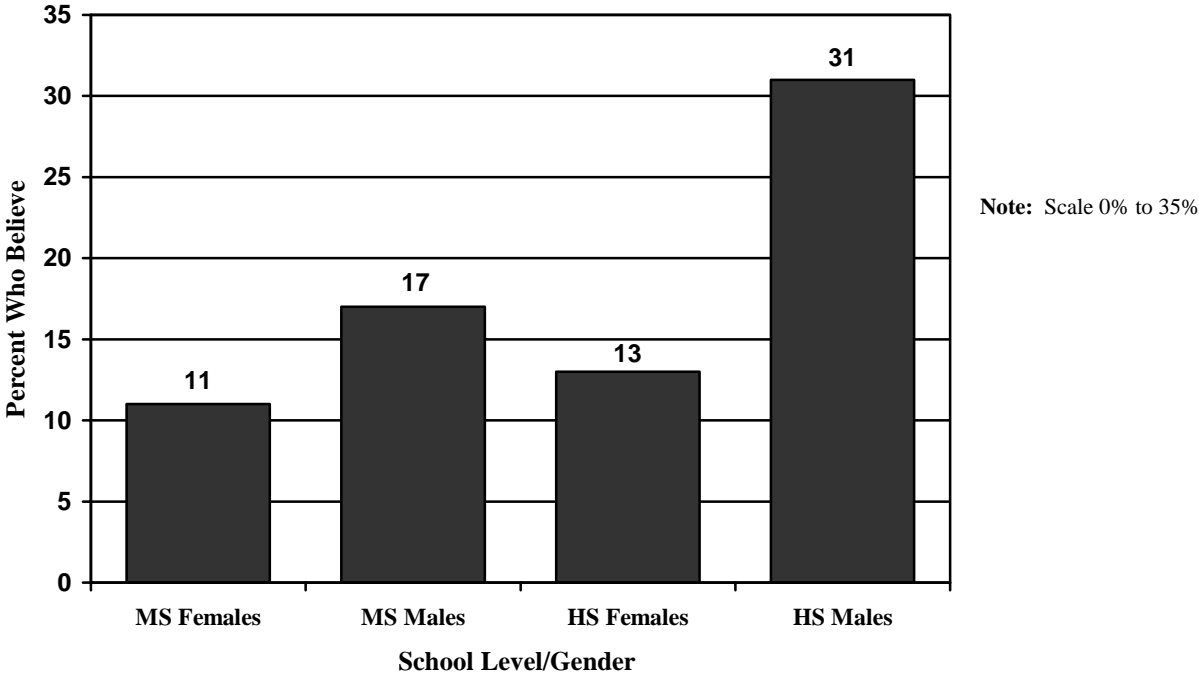
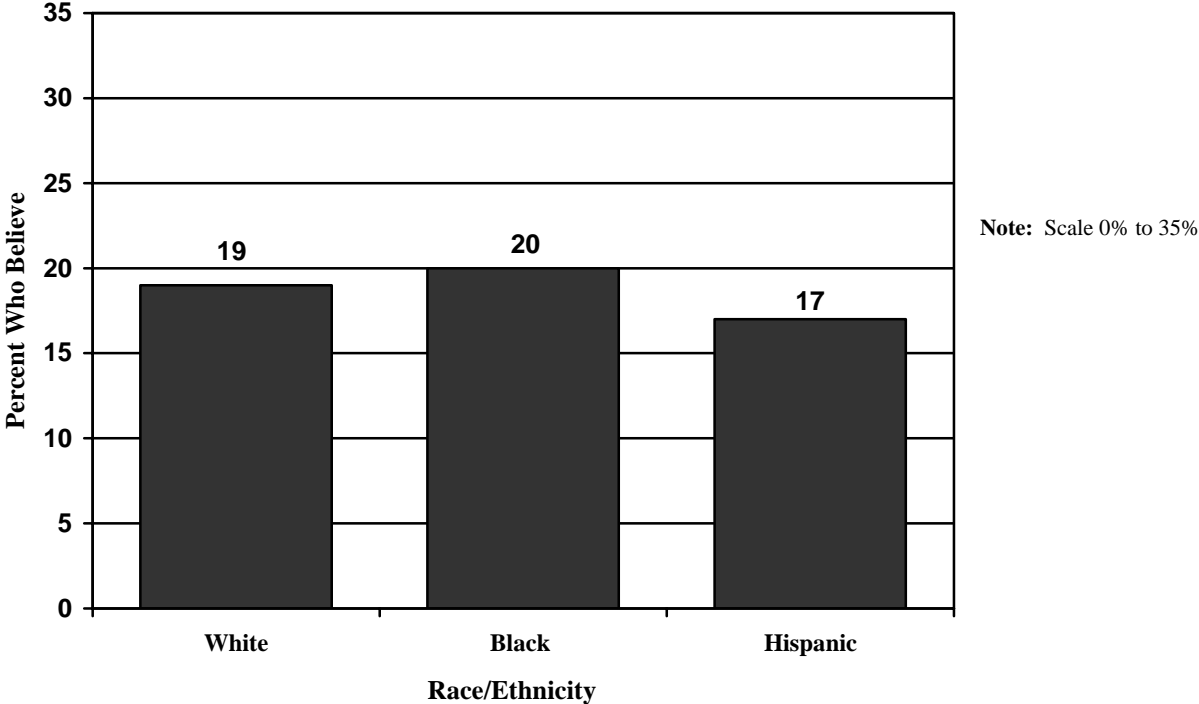


Figure 39: Believe Smokers Can Smoke Where/When They Want by Race/Ethnicity



Would Volunteer on a Non-Smoking Campaign

Finally, students were asked if they would ever volunteer to work on a no-smoking campaign. Overall, 56% of students responded that they would, with middle school students indicating they would be more likely to volunteer than high school students (65% versus 50%). Middle school females reported the highest percentage of positive responses (72%), while male high school students were least likely to consider volunteering for a no-smoking campaign (41%) (Figure 40). In looking at the responses of different racial groups to this question, black students reported the highest percentage of those willing to volunteer (60%) and white students reported the lowest percentage (54%) (Figure 41).

Figure 40: Would Volunteer on No-Smoking Campaign by Gender and Level

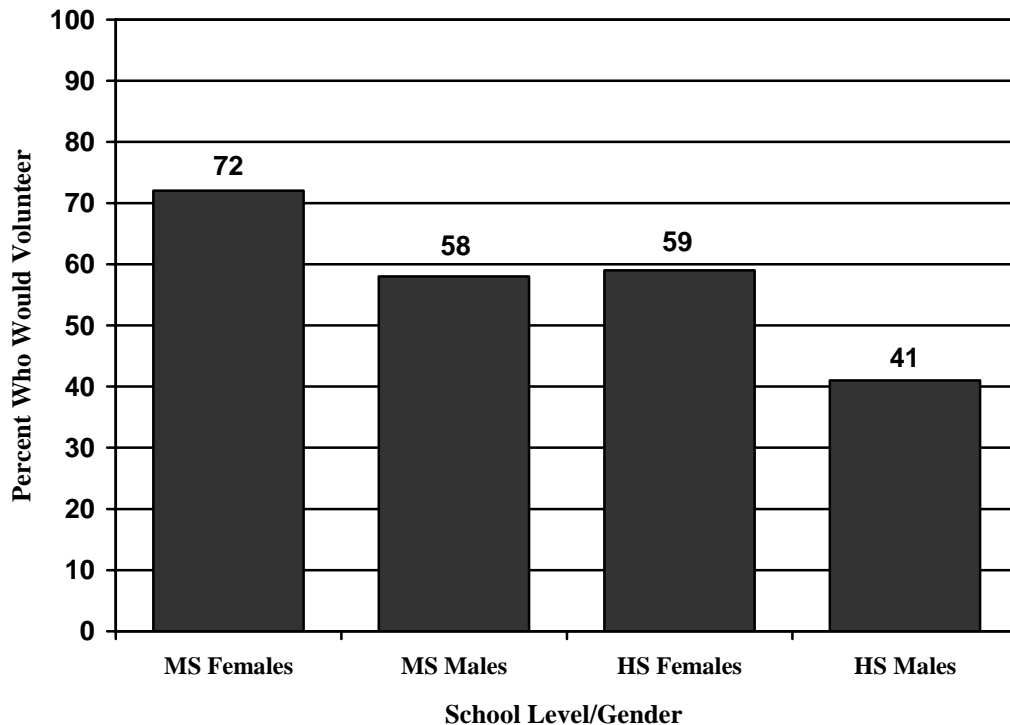
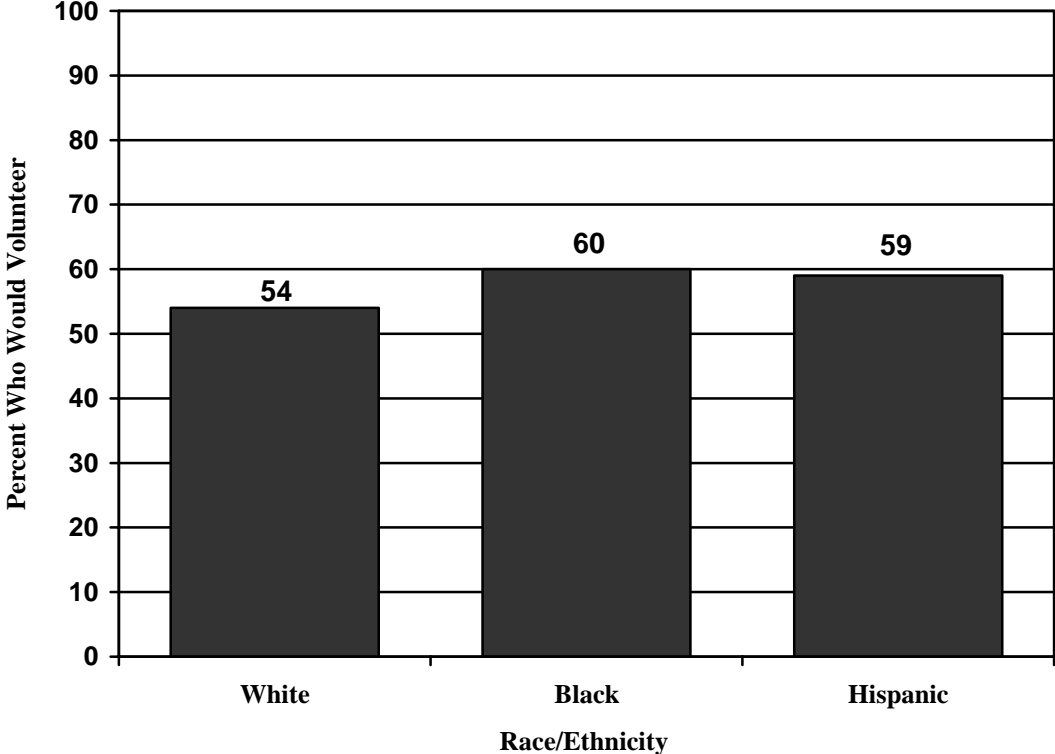


Figure 41: Would Volunteer on No-Smoking Campaign by Race/Ethnicity



Appendix A

2005 Youth Tobacco Survey Questionnaire

Virginia Youth Tobacco Survey 2005-2006 Questionnaire Instructions

Good (morning/afternoon). The Virginia Tobacco Settlement Foundation is conducting this student survey. One of the many responsibilities of the Virginia Tobacco Settlement Foundation is to help schools provide students with information about behaviors that increase the risk of health problems now or in the future. The questions are about your personal tobacco use and methods of obtaining tobacco products. You may skip any question that you do not want to answer or stop whenever you like. Participating in this survey is voluntary and your grade in this class will not be affected whether or not you answer the questions. However, only a limited number of students like yourselves are participating in this survey in schools all over the state. The answers you give are very important. Are there any questions? (*pause for questions*) Are you willing to participate in this survey? (*pause and send those that do not want to participate to join the others who are not taking the survey.*)

I would like to thank each of you for participating. Participating in this survey is voluntary and your grade in this class will not be affected whether or not you answer the questions. However, only a limited number of students like yourselves are participating in this survey in schools all over the state. The answers you give are very important. I ask that you read each question carefully and answer it based on what you really know or do. I would like to emphasize that this is not a test of you or this school.

Throughout the entire survey process, I will maintain strict procedures to protect your privacy and allow for your anonymous participation. Please do not write your name on the questionnaire or Answer Sheet. Your answers are private. Results of this survey will never be reported by name, class, or school. When everyone is done, you can deposit your Answer Sheet in this large envelope (box).

Now I would like you to look at the Answer Sheet. Use the No. 2 pencil you have been given to fill out this Answer Sheet. Do not use a pen or some other pencil. Notice that for each question there are a series of circles on the Answer Sheet. For each question that you answer on the survey, choose just one answer that best fits what you know or do, then fill in the corresponding circle on the Answer Sheet. If you must change an answer, erase your old answer completely. With the exception of Question 4, only one circle should be filled in for each question on the Answer Sheet.

If you do not know the answer to a question or prefer not to answer, just skip it. Also, if you choose to stop the survey after you have started, just let me know. We have allowed the entire class period for completing the survey, which means that the survey will end at approximately _____ (a.m./p.m.). If you finish before that time, stay seated.

It is important that you answer the survey based on what you really know or do. Do not pick a response just because you think that is what someone wants you to say.

After Questionnaires and Answer Sheets Are Collected:

I would like to thank all of you for participating in the survey. The information you have provided will be used to develop better health education programs for students like yourselves all around the state.

Virginia Youth Tobacco Survey 2005-2006 Questionnaire

THE FIRST QUESTIONS ASK FOR SOME BACKGROUND INFORMATION ABOUT YOURSELF.

1. **How old are you?**
 - a. 11 years old or younger
 - b. 12 years old
 - c. 13 years old
 - d. 14 years old
 - e. 15 years old
 - f. 16 years old
 - g. 17 years old
 - h. 18 years old or older

2. **What is your sex?**
 - a. Female
 - b. Male

3. **What grade are you in?**
 - a. 6th
 - b. 7th
 - c. 8th
 - d. 9th
 - e. 10th
 - f. 11th
 - g. 12th
 - h. Ungraded or other grade

4. **How do you describe yourself?**
(You can CHOOSE ONE ANSWER or MORE THAN ONE)
 - a. American Indian or Alaskan Native
 - b. Asian
 - c. Black or African American
 - d. Hispanic or Latino
 - e. Native Hawaiian or Other Pacific Islander
 - f. White

5. **Which one of these groups BEST describes you?**
(CHOOSE ONLY ONE ANSWER)
 - a. American Indian or Alaska Native
 - b. Asian
 - c. Black or African American
 - d. Hispanic or Latino
 - e. Native Hawaiian or Other Pacific Islander
 - f. White

THE NEXT GROUP OF QUESTIONS ASK ABOUT TOBACCO USE.

Cigarette Smoking

6. **Have you ever tried cigarette smoking, even one or two puffs?**
 - a. Yes
 - b. No

7. **How old were you when you smoked a whole cigarette for the first time?**
 - a. I have never smoked a whole cigarette
 - b. 8 years old or younger
 - c. 9 or 10 years old
 - d. 11 or 12 years old
 - e. 13 or 14 years old
 - f. 15 or 16 years old
 - g. 17 years old or older

8. **About how many cigarettes have you smoked in your entire life?**
 - a. None
 - b. 1 or more puffs but never a whole cigarette
 - c. 1 cigarette
 - d. 2 to 5 cigarettes
 - e. 6 to 15 cigarettes (about 1/2 a pack total)
 - f. 16 to 25 cigarettes (about 1 pack total)
 - g. 26 to 99 cigarettes (more than 1 pack, but less than 5 packs)
 - h. 100 or more cigarettes (5 or more packs)

9. **Have you ever smoked cigarettes daily, that is, at least one cigarette every day for 30 days?**
 - a. Yes
 - b. No

10. **During the past 30 days, on how many days did you smoke cigarettes?**
 - a. 0 days
 - b. 1 or 2 days
 - c. 3 to 5 days
 - d. 6 to 9 days
 - e. 10 to 19 days
 - f. 20 to 29 days
 - g. All 30 days

11. **During the past 30 days, on the days you smoked, how many cigarettes did you smoke per day?**
 - a. I did not smoke cigarettes during the past 30 days
 - b. Less than 1 cigarette per day
 - c. 1 cigarette per day
 - d. 2 to 5 cigarettes per day
 - e. 6 to 10 cigarettes per day
 - f. 11 to 20 cigarettes per day
 - g. More than 20 cigarettes per day

12. **During the past 30 days, what brand of cigarettes did you usually smoke?
(CHOOSE ONLY ONE ANSWER)**
- a. I did not smoke cigarettes during the past 30 days
 - b. I do not have a usual brand
 - c. Camel
 - d. Marlboro
 - e. Newport
 - f. Virginia Slims
 - g. GPC, Basic, or Doral
 - h. Some other brand
13. **Are the cigarettes you usually smoke menthol cigarettes?**
- a. I do not smoke cigarettes
 - b. Yes
 - c. No
14. **During the past 30 days, how did you usually get your own cigarettes?
(CHOOSE ONLY ONE ANSWER)**
- a. I did not smoke cigarettes during the past 30 days
 - b. I bought them in a store such as a convenience store, supermarket, discount store, or gas station
 - c. I bought them from a vending machine
 - d. I gave someone else money to buy them for me
 - e. I borrowed (or bummed) them from someone else
 - f. A person 18 years old or older gave them to me
 - g. I took them from a store or family member
 - h. I got them some other way
15. **During the past 30 days, where did you buy the last pack of cigarettes you bought?
(CHOOSE ONLY ONE ANSWER)**
- a. I did not buy a pack of cigarettes during the past 30 days
 - b. A gas station
 - c. A convenience store
 - d. A grocery store
 - e. A drugstore
 - f. A vending machine
 - g. I bought them over the Internet
 - h. Other
16. **When you bought or tried to buy cigarettes in a store during the past 30 days, were you ever asked to show proof of age?**
- a. I did not try to buy cigarettes in a store during the past 30 days
 - b. Yes, I was asked to show proof of age
 - c. No, I was not asked to show proof of age
17. **During the past 30 days, did anyone ever refuse to sell you cigarettes because of your age?**
- a. I did not try to buy cigarettes in a store during the past 30 days
 - b. Yes, someone refused to sell me cigarettes because of my age
 - c. No, no one refused to sell me cigarettes because of my age

- 18. During the past 30 days, on how many days did you smoke cigarettes on school property?**
- a. 0 days
 - b. 1 or 2 days
 - c. 3 to 5 days
 - d. 6 to 9 days
 - e. 10 to 19 days
 - f. 20 to 29 days
 - g. All 30 days
- 19. When was the last time you smoked a cigarette, even one or two puffs?**
- a. I have never smoked even one or two puffs
 - b. Earlier today
 - c. Not today but sometime during the past 7 days
 - d. Not during the past 7 days but sometime during the past 30 days
 - e. Not during the past 30 days but sometime during the past 6 months
 - f. Not during the past 6 months but sometime during the past year
 - g. 1 to 4 years ago
 - h. 5 or more years ago
- 20. How long can you go without smoking before you feel like you need a cigarette?**
- a. I have never smoked cigarettes
 - b. I do not smoke now
 - c. Less than an hour
 - d. 1 to 3 hours
 - e. More than 3 hours but less than a day
 - f. A whole day
 - g. Several days
 - h. A week or more
- 21. Do you want to stop smoking cigarettes?**
- a. I do not smoke now
 - b. Yes
 - c. No
- 22. During the past 12 months, did you ever try to quit smoking cigarettes?**
- a. I did not smoke during the past 12 months
 - b. Yes
 - c. No
- 23. How many times during the past 12 months have you stopped smoking for one day or longer because you were trying to quit smoking?**
- a. I have not smoked in the past 12 months
 - b. I have not tried to quit
 - c. 1 time
 - d. 2 times
 - e. 3 to 5 times
 - f. 6 to 9 times
 - g. 10 or more times

- 24. When you last tried to quit, how long did you stay off cigarettes?**
- a. I have never smoked cigarettes
 - b. I have never tried to quit
 - c. Less than a day
 - d. 1 to 7 days
 - e. More than 7 days but less than 30 days
 - f. 30 days or more but less than 6 months
 - g. 6 months or more but less than a year
 - h. 1 year or more

Smokeless Tobacco: Chewing Tobacco, Snuff, or Dip

- 25. Have you ever used chewing tobacco, snuff, or dip, such as Redman, Levi Garrett, Beechnut, Skoal, Skoal Bandits, or Copenhagen?**
- a. Yes
 - b. No
- 26. How old were you when you used chewing tobacco, snuff, or dip for the first time?**
- a. I have never used chewing tobacco, snuff, or dip
 - b. 8 years old or younger
 - c. 9 or 10 years old
 - d. 11 or 12 years old
 - e. 13 or 14 years old
 - f. 15 or 16 years old
 - g. 17 years old or older
- 27. During the past 30 days, on how many days did you use chewing tobacco, snuff, or dip?**
- a. 0 days
 - b. 1 or 2 days
 - c. 3 to 5 days
 - d. 6 to 9 days
 - e. 10 to 19 days
 - f. 20 to 29 days
 - g. All 30 days
- 28. During the past 30 days, on how many days did you use chewing tobacco, snuff, or dip on school property?**
- a. 0 days
 - b. 1 or 2 days
 - c. 3 to 5 days
 - d. 6 to 9 days
 - e. 10 to 19 days
 - f. 20 to 29 days
 - g. All 30 days

29. **During the past 30 days, how did you usually get your own chewing tobacco, snuff, or dip?**
(CHOOSE ONLY ONE ANSWER)
- a. I did not use chewing tobacco, snuff, or dip during the past 30 days
 - b. I bought them in a store such as a convenience store, supermarket, discount store, or gas station
 - c. I gave someone else money to buy them for me
 - d. I borrowed (or bummed) them from someone else
 - e. A person 18 years old or older gave them to me
 - f. I took them from a store or family member
 - g. I got them some other way

Cigars

30. **Have you ever tried smoking cigars, cigarillos, or little cigars, even one or two puffs?**
- a. Yes
 - b. No
31. **How old were you when you smoked a cigar, cigarillo, or little cigar for the first time?**
- a. I have never smoked a cigar, cigarillo, or little cigar
 - b. 8 years old or younger
 - c. 9 or 10 years old
 - d. 11 or 12 years old
 - e. 13 or 14 years old
 - f. 15 or 16 years old
 - g. 17 years old or older
32. **During the past 30 days, on how many days did you smoke cigars, cigarillos, or little cigars?**
- a. 0 days
 - b. 1 or 2 days
 - c. 3 to 5 days
 - d. 6 to 9 days
 - e. 10 to 19 days
 - f. 20 to 29 days
 - g. All 30 days
33. **During the past 30 days, how did you usually get your own cigars, cigarillos, or little cigars?**
(CHOOSE ONLY ONE ANSWER)
- a. I did not smoke cigars, cigarillos, or little cigars during the past 30 days
 - b. I bought them in a store such as a convenience store, supermarket, discount store, or gas station
 - c. I gave someone else money to buy them for me
 - d. I borrowed (or bummed) them from someone else
 - e. A person 18 years old or older gave them to me
 - f. I took them from a store or family member
 - g. I got them some other way

Pipe

34. During the past 30 days, on how many days did you smoke tobacco in a pipe?
- a. 0 days
 - b. 1 or 2 days
 - c. 3 to 5 days
 - d. 6 to 9 days
 - e. 10 to 19 days
 - f. 20 to 29 days
 - g. All 30 days

Bidis and Kreteks

THE NEXT QUESTIONS ARE ABOUT BIDIS (OR “BEEDIES”) AND KRETEKS (ALSO CALLED “CLOVE CIGARETTES”). BIDIS ARE SMALL BROWN CIGARETTES FROM INDIA CONSISTING OF TOBACCO WRAPPED IN A LEAF TIED WITH A THREAD. KRETEKS ARE CIGARETTES CONTAINING TOBACCO AND CLOVE EXTRACT.

35. Have you ever tried smoking any of the following:
- a. Bidis
 - b. Kreteks
 - c. I have tried both bidis and kreteks
 - d. I have never smoked bidis or kreteks
36. During the past 30 days, on how many days did you smoke bidis or kreteks?
- a. 0 days
 - b. 1 or 2 days
 - c. 3 to 5 days
 - d. 6 to 9 days
 - e. 10 to 19 days
 - f. 20 to 29 days
 - g. All 30 days

THE NEXT QUESTIONS ASK ABOUT YOUR THOUGHTS ABOUT TOBACCO.

37. Do you think that you will try a cigarette soon?
- a. I have already tried smoking cigarettes
 - b. Yes
 - c. No
38. Do you think you will smoke a cigarette at anytime during the next year?
- a. Definitely yes
 - b. Probably yes
 - c. Probably not
 - d. Definitely not

39. **Do you think you will be smoking cigarettes 5 years from now?**
- a. I definitely will
 - b. I probably will
 - c. I probably will not
 - d. I definitely will not
40. **If one of your best friends offered you a cigarette, would you smoke it?**
- a. Definitely yes
 - b. Probably yes
 - c. Probably not
 - d. Definitely not
41. **In the past 12 months, how often have your parents or guardians discussed the dangers of tobacco use with you?**
- a. Never
 - b. Rarely
 - c. Sometimes
 - d. Often
 - e. Very often
42. **Do you think people can get addicted to using tobacco just like they can get addicted to using cocaine or heroin?**
- a. Definitely yes
 - b. Probably yes
 - c. Probably not
 - d. Definitely not
43. **Do you think young people who smoke cigarettes have more friends?**
- a. Definitely yes
 - b. Probably yes
 - c. Probably not
 - d. Definitely not
44. **Do you think smoking cigarettes makes young people look cool or fit in?**
- a. Definitely yes
 - b. Probably yes
 - c. Probably not
 - d. Definitely not
45. **Do you think young people risk harming themselves if they smoke from 1 - 5 cigarettes per day?**
- a. Definitely yes
 - b. Probably yes
 - c. Probably not
 - d. Definitely not
46. **Do you think it is safe to smoke for only a year or two, as long as you quit after that?**
- a. Definitely yes
 - b. Probably yes
 - c. Probably not
 - d. Definitely not

47. **Do you think you would be able to quit smoking cigarettes now if you wanted to?**
a. I do not smoke now
b. Yes
c. No
48. **Have you ever participated in a program to help you quit using tobacco?**
a. I have never used tobacco
b. Yes
c. No
49. **During this school year, were you taught in any of your classes about the dangers of tobacco use?**
a. Yes
b. No
c. Not sure
50. **During this school year, did you practice ways to say NO to tobacco in any of your classes (for example by role-playing)?**
a. Yes
b. No
c. Not sure

THE NEXT QUESTIONS ASK ABOUT EVENTS YOU MAY HAVE ATTENDED OR WHAT YOU HAVE SEEN ON TV, AT THE MOVIES, OR ON THE INTERNET.

51. **During the past 12 months, have you participated in any community activities to discourage people your age from using cigarettes, chewing tobacco, snuff, dip, or cigars?**
a. Yes
b. No
c. I did not know about any activities
52. **During the past 30 days, have you seen or heard commercials on TV, the Internet, or on the radio about the dangers of cigarette smoking?**
a. Not in the past 30 days
b. 1-3 times in the past 30 days
c. 1-3 times per week
d. Daily or almost daily
e. More than once a day
53. **When you watch TV or go to movies, how often do you see actors using tobacco?**
a. I don't watch TV or go to movies
b. Most of the time
c. Some of the time
d. Hardly ever
e. Never
54. **When you watch TV, how often do you see athletes using tobacco?**
a. I don't watch TV
b. Most of the time
c. Some of the time
d. Hardly ever
e. Never

55. **When you are using the Internet, how often do you see ads for tobacco products?**
- a. I don't use the Internet
 - b. Most of the time
 - c. Some of the time
 - d. Hardly ever
 - e. Never

SOME TOBACCO COMPANIES MAKE ITEMS LIKE SPORTS GEAR, T-SHIRTS, LIGHTERS, HATS, JACKETS, AND SUNGLASSES THAT PEOPLE CAN BUY OR RECEIVE FREE.

56. **During the past 12 months, did you buy or receive anything that has a tobacco company name or picture on it?**
- a. Yes
 - b. No
57. **Would you ever use or wear something that has a tobacco company name or picture on it such as a lighter, t-shirt, hat, or sunglasses?**
- a. Definitely yes
 - b. Probably yes
 - c. Probably not
 - d. Definitely not

THE NEXT QUESTIONS ASK ABOUT YOUR EXPOSURE TO TOBACCO USE.

58. **During the past 7 days, on how many days were you in the same room with someone who was smoking cigarettes?**
- a. 0 days
 - b. 1 or 2 days
 - c. 3 or 4 days
 - d. 5 or 6 days
 - e. 7 days
59. **During the past 7 days, on how many days did you ride in a car with someone who was smoking cigarettes?**
- a. 0 days
 - b. 1 or 2 days
 - c. 3 or 4 days
 - d. 5 or 6 days
 - e. 7 days
60. **Do you think the smoke from other people's cigarettes is harmful to you?**
- a. Definitely yes
 - b. Probably yes
 - c. Probably not
 - d. Definitely not
61. **Does anyone who lives with you now smoke cigarettes?**
- a. Yes
 - b. No

THE NEXT QUESTIONS ASK ABOUT WHAT OTHER PEOPLE DO.

62. **Does anyone who lives with you now use chewing tobacco, snuff, or dip?**

- a. Yes
 - b. No
- 63. How many of your four closest friends smoke cigarettes?**
- a. None
 - b. One
 - c. Two
 - d. Three
 - e. Four
 - f. Not sure
- 64. How many of your four closest friends use chewing tobacco, snuff, or dip?**
- a. None
 - b. One
 - c. Two
 - d. Three
 - e. Four
 - f. Not sure
- 65. Which of the following statements are true?
(You can CHOOSE ONE ANSWER, or MORE THAN ONE)**
- a. No one smokes in my home
 - b. I smoke in my home
 - c. My mother (or Female Guardian) smokes in my home
 - d. My father (or Male Guardian) smokes in my home
 - e. My older brother/sister smokes in my home
 - f. My younger brother/sister smokes in my home
 - g. My grandmother/grandfather smokes in my home
 - h. Some one else (specify: _____) smokes in my home

THE LAST QUESTIONS ASK ABOUT HOW YOU FEEL.

- 66. Who sets the standard for what is considered cool?**
- a. Boys
 - b. Girls
- 67. Should smokers be able to smoke where and when they want?**
- a. Yes
 - b. No
- 68. Is it ok for youth to try smoking?**
- a. Yes
 - b. No
- 69. Would you ever volunteer to work on a no-smoking campaign?**
- a. Yes
 - b. No

Thank You!

Appendix B

Technical Report on Methodology

Youth Tobacco Survey, 2005

Technical Report

Methodology

Survey Administration and Quality Control. Following receipt of the list of randomly selected schools from the CDC, an Access database was constructed that included and linked all contact information for the selected schools at the division and school level. The information included in this database was downloaded from Virginia's Department of Education (VDOE) website and/or obtained directly from VDOE. This database was updated with additional information that came directly from a division's superintendent's office or from the selected schools. It was then utilized for all subsequent phone, e-mail, or mailing contact to the superintendents or school principals. It was also used to track communications with both division superintendents and schools. Reports were generated at least weekly detailing the status of all schools in the sample.

Contact began at the division level. All division superintendents from selected schools were sent a packet of information that included several items: a copy of the YTS, a cover letter addressed to the superintendent detailing the study, a list of the schools selected from their division, a copy of the parental notification form, a FAQ sheet, and a form that the division could send back that indicated whether or not they would be willing to participate as well as a self-addressed, stamped envelope that they could use to return the form. Packets were sent via Federal Express. If we did not receive the completed form indicating agreement to participate, we followed up with a phone call and/or e-mail within 1-2 weeks.

After receiving consent at the division level to include a school(s) in the study, a packet was sent to each school principal to notify them of their inclusion in the study and to provide relevant information about the YTS. (Note: in some cases a school division would elect to appoint a coordinator within the school system to handle coordination with their schools. In these cases we had very little contact with the schools until it was time to confirm administration). School packets included the same information and forms as the division level packets. Packets were again mailed via FedEx, and were followed up with a phone call and/or e-mail within a week to the school principal. Most principals provided the name of a school coordinator, who then provided the list of classes. If a school was not able to use 2nd period classes, they could provide us with some other class list that would include each eligible student once and only once. For example, in some schools all children are required to take Physical Education (PE). In those schools we could select from all PE classes, and eliminate the need to take class time from core classes or classes that were focusing on the State's Standards of Learning (SOL) exams. Once a class list was received, eligible classes were numbered and were then randomly selected using a list of numbers provided from the CDC that was based on the size of the school. It was expected that we would select an average of 2 classes per school for this study.

Principals or their designated school coordinators were advised of the classes that were selected at their school and were asked to select a date and time for administration. Once a date and time were selected, the school coordinator was e-mailed a confirmation of the date(s), times and classes included in the survey effort, as well as a reminder of the school's responsibilities prior to survey administration. This e-mail included an electronic copy of the parental notification letter and a one page fact sheet about the Youth Tobacco Survey. The letter notified the parents of the

survey and provided a brief description of the survey instrument and its intended use. The letter explained that participation of their student was voluntary and that no action would be taken against the school, the parent, or the child, if the child chose not take part. The letter also explained how each child's anonymity would be protected and that no name or other identifying information would be placed on the survey instrument. These letters were to be sent home with students before the survey administration date.

Once a school had selected a date and time, the scheduling coordinator would notify VCU survey administrators, who would sign up as they were available. Survey packets to be taken to the schools were assembled and checked for accuracy. Two days prior to administration the school coordinator was contacted to verify time of arrival and to ensure that the parental notification letters were sent out to parents of the students in the selected classrooms. In some cases this had not yet been done and administration was rescheduled. As a measure of quality assurance, packets were rechecked by the survey administrators prior to leaving for administration.

Survey administrators were recruited at the University's employment website, seeking upper-level undergraduates or graduate students with experience in an educational setting. After applications were accepted, screened, and interviews were held, selected administrators participated in a comprehensive training session. This training session included an overview of the Youth Tobacco Survey project, the importance of confidentiality, the specifics on how to document school and class participation, protocol on the presentation and administration of the YTS to the students, materials needed for survey administration, and instructions on how to complete all related forms.

The survey was administered from September of 2005 through January of 2006. These dates were selected in order to accommodate as many schools as possible, and to avoid dates for SOL or other standardized testing. Before administering the survey, all students who declined to participate were removed from the survey administration area. Administrators provided students with a survey, an answer sheet and a No. 2 pencil. All administrators read a prepared script aloud which included information about survey, instructions on how to correctly complete the survey, and a sentence that stated that the student could skip any questions that they did not want to answer. Students were instructed not to place their name anywhere on the survey or answer sheet, and no information was placed on the survey that could link it to an individual. After completing the survey, students brought the answer sheet up and placed it themselves in an envelope. This procedure was designed to ensure the anonymity of all participants. When all students had returned their answer sheets, the administrator recorded on the Classroom-Level Form the number of participating students. They were instructed to wait until the students had left the room to count the answer sheets, and then they completed a Header Sheet for each selected class. Administrators verified total enrollment for the classroom with the teacher. If this number varied from the enrollment number given to us by the school coordinator, the administrator would find out the reason for the difference and record this information on the form.

Header sheets and all completed surveys were returned to the Survey and Evaluation Research Laboratory at Virginia Commonwealth University for processing and submission to the CDC. All surveys were reviewed by staff in order to assure that all forms were filled out completely and correctly. VCU staff made no attempt to determine a response in the situations where it was unclear, choosing to leave items blank. YTS scan sheets were sent directly to the CDC's

contractor for scanning. VCU received case level data from CDC, which was analyzed by VCU staff members.

Sampling and Weighting

The 2005 Virginia Youth Tobacco Survey (YTS) was conducted by Virginia Commonwealth University (VCU) according to guidance issued by the Centers for Disease Control and Prevention (CDC). The samples were selected and provided by the CDC and were based off of the State Department of Education's public school enrollment data. The data were weighted to account for unequal chances of selection, differential non-response, and demographics (grade, race, and gender) so as to better represent middle school and high school children in Virginia. VCU used some information from CDC as part of this process, and executed additional parts of the weighting process independently, following the logic of CDC's process for fully weighting the data.

The poststratification weights ranged from about 0.83 (male middle schoolers of other ethnicities) to about 1.75 (female high schoolers of other ethnicities). These are not unusually extreme weighting values. In addition, the geographic spread of the responding schools and school divisions is diverse and includes significant representation from all health planning regions in the state.

Essentially, two separate samples were selected, one consisting of high school students, and one comprised of middle school students. For the high school sample in the 2005 Virginia YTS, all regular schools containing grades 9, 10, 11, or 12 were included in the sampling frame. For the middle school sample in the 2005 Virginia YTS, all regular schools containing grades 6, 7, or 8 were included in the sampling frame

A two-stage cluster sample design was used to produce a representative sample of students in grades 6-8 and for those in grades 9-12.

The first-stage (school level) sampling frame consisted of all schools containing any of grades 9-12 for the high school sample and grades 6-8 for the middle school sample. Schools were selected with probability proportional to school enrollment size. The second sampling stage (class level) consisted of systematic equal probability sampling (with a random start) of classes from each school that participated in the survey. Second period classes were targeted for inclusion in the sampling frames for selected schools, but in some cases other class periods or types of classes were substituted. Substitutions occurred when schools declined to make second period classes available (e.g., because they did not want to lose SOL-related instruction time) or their second period classes would not have included all students in the sampling frame. All students in the selected classes were eligible to participate in the survey.

At the high school level, 50 schools were selected and 29 agreed to participate (58.00%). Within the selected classes at those schools there were 1,424 eligible students, of whom 1,142 (80.20%) returned usable questionnaires. The overall response rate for high schools in the 2005 Virginia YTS is 46.51% ($58.00\% * 80.20\% = 46.51\%$).

At the middle school level, 50 schools were selected and 35 agreed to participate (70.00%). Within the selected classes at those schools there were 1,392 students, of whom 1,219 (87.57%)

returned usable questionnaires. The overall response rate for middle schools in the 2005 Virginia YTS is 61.30% ($70.00\% * 87.57\% = 61.30\%$). Overall, Virginia's response rate was 53.7%. This was determined based on a school-level response rate of 64% multiplied by the student-level response rate of 83.8%.

The sampling and weighting procedures for the Virginia YTS involve a clustered and stratified design. Such complex sample designs require special approaches to calculating sampling variances. Because sampling variances underlie the calculation of confidence intervals for survey statistics (such as sampling errors and tests of statistical significance), it is critical to calculate them correctly by taking into account the effects of the complex sample design.

In general, the confidence intervals on these estimates are 1.5 to 2 times as wide as confidence intervals that would be calculated by assuming this was a simple random sample (that is, by ignoring the sample design information in the file). Sampling errors for many items in the 2005 Virginia YTS are approximately +/- 1% to +/- 5% but can range much higher than that in some cases. The proper calculations should be carried out on each item of interest to make sure what the correct confidence intervals are.

Readers should keep in mind that surveys may have other errors besides sampling error. Every effort was made to minimize all sources of error in this survey, but errors other than sampling error can be difficult or impossible to measure.

Please note that there are slight discrepancies in percentages from the 2003 to the 2005 YTS report. This occurred because of rounding differences due to the latest version of SPSS software being used for data analysis. Also, the method of analysis was changed from 2003 to 2005 for one question (see footnote, page 32).

Appendix C

Data Tables