

# **AN IOWA 2000 YOUTH TOBACCO SURVEY REPORT**

**A NEEDS ASSESSMENT DESCRIPTIVE PROFILE:  
USE RATES, BRAND PREFERENCES, QUITTING EXPERIENCES, PURCHASING BEHAVIOR,  
TOBACCO-RELATED ATTITUDES, AND USE AND PREVENTION EXPOSURE**

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## INTRODUCTION

With funds obtained from the Master Settlement Agreement between the states and tobacco companies, each state in the Nation has the opportunity to implement a sustained and comprehensive tobacco control program for their youth. Data collection (a requirement for needs assessment and evaluation) is an integral part of any comprehensive tobacco control program. The Office on Smoking and Health, National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention (CDC) was assigned the task of coordinating each state's data collection efforts. The CDC developed a core set of questions that would be included in each state's survey of its adolescent population and provided technical assistance to the states regarding sample selection and appropriate data analysis techniques. The Youth Tobacco Surveys were intended to enhance the capacity of each state to design, implement and evaluate comprehensive tobacco control programs.

The 2000 Iowa Youth Tobacco Survey (IYTS) questionnaire included the CDC recommended questions and five additional questions. A copy of the 2000 survey instrument can be obtained from the Iowa Department of Public Health, Division of Tobacco Use Prevention and Control, Lucas State Office Building, Des Moines, Iowa 50319-0075. The population base (grades 6 through 12) and sampling design recommended by the CDC were also adopted in Iowa. A multistage sampling design was used. The first stage involved a random selection of public and nonpublic schools proportional to their enrollment size, followed by a random selection of classes within each school. The parents of the students in the selected classes were mailed a letter of explanation and a form to return if they did not want their student to participate. Very few parents rejected participation. All students in the selected classes, whose parents did not object, were asked to participate in the survey.

Those students that did choose to participate completed an anonymous and confidential self-administered questionnaire that included questions concerning their: demographics (age, sex, grade in school and race/ethnicity), use of tobacco products, second hand smoke exposure, purchasing habits, tobacco-related knowledge and attitudes, tobacco-related media and advertising exposure, and tobacco prevention program exposure.

A total of 60 schools in Iowa were selected to participate in the 2000 IYTS: 30 middle schools (grades 6 through 8) and 30 high schools (grades 9 through 12). Twenty-six of the middle schools and 27 of the high schools provided data (an 88% school response rate). Within these schools, all students in grades 6 through 12 in the second period classrooms were asked to participate. There were 2,108 middle school students selected to participate and 1,834 (87%) completed a useable questionnaire. There were 1,934 high school students selected to participate and 1,445 (75%) completed a useable questionnaire. The overall response rate, including both schools and students, was 75% for the middle school sample and 67% for the high school sample. The questionnaires were completed between March and May of 2000.

The IYTS sample selection process would, if everyone in the sample agreed to participate, produce a sample that matched the population (all of Iowa's enrolled students in grades 6 through 12). However, as described in the previous paragraph, not everyone who was selected agreed to participate. This introduces the possibility that the sample of students actually completing the 2000 IYTS may not be representative of all 6<sup>th</sup> through 12<sup>th</sup> graders in the State and that the prevalence rates obtained from this sample might not accurately reflect the actual population prevalence rates. Weighting is used to help insure that the sample of respondents who actually completed the questionnaire matches the population it was intended to represent. Weighting changes the data in a way that makes the results of data analysis more likely to provide reliable and valid population estimates.

The weighting procedure developed by the CDC for the 2000 IYTS is somewhat complex in terms of its actual mathematical application, but it is relatively simple in terms of its objectives. A weighting factor was applied to each student record (the responses to the 2000 IYTS questionnaire) to adjust for non-response at the school and student level, and for varying probabilities of selection. The weights were then adjusted so that the weighted proportion of students in each grade and gender matched those proportions in the Iowa student population. While complex in its application, this weighting procedure is simply a method that helps insure, given some assumptions, that the sample of students actually completing the 2000 IYTS actually matches the population of students it is intended to represent. In short, the tobacco-related prevalence rate estimates obtained from the weighted 2000 IYTS sample are more likely than those based on an unweighted 2000 IYTS sample to match the actual prevalence rates in the total population of 6<sup>th</sup> through 12<sup>th</sup> graders in Iowa.

Unfortunately the 2000 IYTS sample is too small to provide meaningful demographic (county) or race/ethnicity based analyses. Less than three percent of Iowa's total population is nonwhite and all the race/ethnic minority categories in the 2000 IYTS include less than 50 students. Prevalence rate estimates based on samples with less than 50 students are typically untrustworthy. Also, Iowa has 99 counties and a total sample of only 3,279 students in grades 6 through 12 would obviously leave several counties with little or no representation. Even if every county was equally represented, and they are not, there would at best be 33 students (3,279 divided by 99) from each county, a number that is considerably below the sample size adequate to produce trustworthy prevalence rate estimates. The 2000 IYTS data do, however, provide a very useful descriptive profile of Iowa's middle and high school, both male and female, students' tobacco-related behaviors and attitudes.

Some very basic descriptive profile findings for middle and high school students from the 2000 IYTS have been previously reported (Iowa Youth Tobacco Survey - Initial Report - 2000). This second report provides a more comprehensive profile of middle and high school students' tobacco-related behaviors and attitudes, including male and female differences. The purpose of this second report is to: 1) help tobacco control program planners and administrators more comprehensively identify the extent and kinds of tobacco control program needs in Iowa, and 2) provide data that can be used to make resource allocation decisions that are based on objectively identified needs.

This second report, like the first, is restricted to descriptive profiles, with a focus on identifying middle vs. high school and male vs. female differences. Because all surveys are subject to sampling and measurement error, the differences observed in this report may not be real. Statistical tests of significance can be used as a means to identify real differences, but at this exploratory stage of analysis practical significance is even more important. That is, if the differences observed are not large enough to be of practical consequence (differences large enough to justify resource allocation decisions), then small, but statistically significant differences, are of little value for the purposes of this report.

From both a statistical and practical perspective, the larger the differences observed, the more important those differences are in terms of identifying program needs and making resource allocation decisions. While not binding in any respect in terms of either statistical or practical significance, a couple of general guidelines are offered for the reader's consideration. A 5% difference would be a statistically significant difference in most, but not all, instances with samples of the size included in this report. Perhaps 10% or larger might be more appropriate for identifying practical significance. Our readers may have a better appreciation of what is of practical significance for a specific purpose, but at least these general criteria provide some guidelines to follow.

In addition, Tables 2 through 4 provide the 95% confidence intervals (CIs) for a selected number of the tobacco use prevalence rates reported in this analysis. These confidence intervals mean that we can be 95% confident that the actual prevalence rates are within that many percentage points (either larger or smaller) of the observed prevalence rates in this sample. Readers should note that most, but not all, of the confidence intervals are smaller than 5%.

Finally, the author of this report has provided some inferences regarding the causes/implications of the differences observed. It must be kept in mind that these inferences are the author's speculations about what might be happening and that others might draw different, but equally valid, inferences from the same observed differences. Also, these inferences are the sole responsibility of the author and do not necessarily reflect the opinions of the agencies involved in the 2000 Iowa Youth Tobacco Survey.

## EXECUTIVE SUMMARY

### Methods

The 2000 Iowa Youth Tobacco Survey (IYTS) was completed by a random sample of students enrolled in Iowa's schools in grades 6 through 12. A total of 1,834 middle school students (grades 6 through 8) and 1,445 high school students (grades 9 through 12) completed an anonymous and confidential, self-administered questionnaire concerning their: tobacco product use, second hand smoke exposure, purchasing habits, tobacco-related knowledge and attitudes, tobacco-related media and advertising exposure, and tobacco prevention program exposure.

### Findings

The following are the major findings obtained from this analysis of the 2000 IYTS. Readers are encouraged to read the full report to obtain all the detailed findings.

**Lifetime Tobacco Use.** Tobacco product experimentation is very widespread among Iowa students enrolled in grades 6 through 12. 68% of high school students (grades 9 through 12) and 46% of middle school students (grades 6 through 8) have tried some kind of tobacco product in their lifetime. Of the total 119,865 middle school and 164,802 high school students enrolled in Iowa's public and nonpublic schools, an estimated 167,203 have tried a tobacco product in their lifetime.

Most of Iowa's 6<sup>th</sup> through 12<sup>th</sup> grade tobacco product experimenters include cigarettes in their lifetime tobacco use (63% of high school and 39% of middle school students). Smokeless tobacco is much less popular, but 27% of high school students (an estimated 44,496 grade 9 through 12 students) and 14% of middle school students (an estimated 16,781 grade 6 through 8 students) have tried a smokeless tobacco product in their lifetime.

Males are more likely than females to experiment with tobacco products, especially smokeless tobacco (19% vs. 8% in middle school and 42% vs. 12% in high school). It does appear, however, that male and female differences in tobacco product experimentation are smaller for middle school students than high school students. This would tend to suggest that the younger generations of females are catching up with their male counterparts (especially in terms of lifetime cigarette use).

**Current (Past 30 Days) Tobacco Use.** Current (past 30 days) use of any tobacco product is, fortunately, considerably smaller than lifetime use. Still, 39% of Iowa's high school students (an estimated 64,273 students) report current use of any tobacco product, as do 16% (an estimated 19,178) of their middle school counterparts. These prevalence rates are slightly higher than the national averages of 35% and 13%.

The most popular tobacco product in current (past 30 days) use is cigarettes (used by an estimated 68,769 grade 6 through 12 Iowans, followed by cigars (an estimated 31,912 users)

and smokeless tobacco (an estimated 22,923 users). Pipe smoking tobacco and bidi and kretek (fruit and candy flavored tobacco cigarettes) were used by less than 5% (less than 15,000) of Iowa's 6<sup>th</sup> through 12<sup>th</sup> graders.

As with lifetime tobacco use, current tobacco use is somewhat more common among 6<sup>th</sup> through 12<sup>th</sup> grade males than females. Again, however, the middle school (grades 6 through 8) sex differences are smaller than the high school differences.

With each progression in grade in school there is a corresponding jump in current (past 30 days) tobacco product use. For males the largest increases are from 6<sup>th</sup> to 7<sup>th</sup> grade (10% to 21%), 8<sup>th</sup> to 9<sup>th</sup> grade (23% to 31%) and from 9<sup>th</sup> to 10<sup>th</sup> grade (31% to 50%). Females report the largest increases from 7<sup>th</sup> to 8<sup>th</sup> grades (14% to 22%) and from 9<sup>th</sup> to 10<sup>th</sup> grade (23% to 31%).

**Current Regular/Dependent Tobacco Use.** There is, unfortunately, also evidence to indicate that many of Iowa's 6<sup>th</sup> through 12<sup>th</sup> graders have reached a point in their tobacco product use that would indicate they have already reached the level of habit forming use. In the 30 days prior to interview an estimated 27,867 of Iowa's 6<sup>th</sup> through 12<sup>th</sup> graders were smoking cigarettes on 20 or more days; 7,791 were using smokeless tobacco products on 20 or more days; 18,877 were smoking six or more cigarettes per smoking day, and 26,219 felt they could not go a whole day without smoking a cigarette. It would seem clear that there are at least 25,000 6<sup>th</sup> through 12<sup>th</sup> grade students in Iowa who are regular, if not addicted, tobacco product users. Based on current estimates about half of these tobacco product users will be killed by their habit, losing an average of 20-25 years of nonsmoking life expectancy.

Female and male differences in tobacco product dependency rates are minimal and in many instances the female prevalence rates are slightly higher than the male prevalence rates.

**Projected Tobacco Use.** An estimated 80,155 6<sup>th</sup> through 12<sup>th</sup> graders in Iowa think they will be smoking cigarettes one year from now, and 49,741 think they will be smoking cigarettes five years from now. Again, females are just as likely, or even slightly more likely, than males to think they will be smoking cigarettes in the future.

**Second Hand Smoke Exposure.** Well over half (77% of Iowa's high school students and 61% of middle school students) reported they spent one or more of the last seven days in a room with a person who was smoking. Also, approximately half (57% of high school students and 49% of middle school students) reported they spent one or more of the last seven days in a car with someone who was smoking. The sex differences were minor and it is clear that second hand smoke exposure is very prevalent for both sexes.

**Tobacco Brand Preferences.** The Marlboro brand of cigarettes is preferred by a wide margin of Iowa's 6<sup>th</sup> through 12<sup>th</sup> grade current (past 30 days) cigarette smokers. Marlboro is the choice of 72% of high school current smokers and 59% of middle school current smokers, with sex differences being minimal.

Menthol cigarettes are **not** usually smoked by either middle or high school current smokers. Also, neither sex usually smokes menthol cigarettes. Middle school females are most likely to use menthol cigarettes (36%) and high school females the least likely (17%).

**Quitting Experiences.** Over half (51%) of the current (past 30 days) high school cigarette smokers expressed a desire to quit smoking cigarettes at the time of interview, and 80% of the current high school smokers think they probably or definitely could quit. Less than half (46%) of the current middle school cigarette smokers expressed a desire to quit and 72% of them felt they probably or definitely could quit. Middle and high school females expressed a slightly higher desire to quit and a slightly smaller likelihood that they could quit.

About half (46%) of current (past 30 days) high school cigarette smokers have tried to quit two or more times and 41% of their middle school counterparts have made a similar number of efforts to quit. Current cigarette smoking middle and high school females were more likely than their male counterparts to have tried quitting two or more times.

**Current (Past 30 Days) Tobacco Users Under the Age of 18 Purchasing Behaviors.**

Most middle and high school current cigarette smokers under the legal purchasing age obtain their cigarettes by having others buy them or borrowing from others. Vending machines are used the least by underage smokers. Underage smokers are most likely to purchase their last pack of cigarettes in a gas station, convenience store or “other” place. Fifty-three percent of high school underage smokers made their last purchase in a gas station, as did 27% of their middle school counterparts. Like underage cigarette smokers, underage smokeless tobacco users, are most likely to obtain their tobacco product from an acquaintance.

Most (over 65%) middle and high school smokers under the legal purchasing age who tried to buy cigarettes in a store in the 30 days prior to interview reported that they were not asked to show their proof of age. Nearly 70% of all middle and high school current, underage smokers who tried to buy cigarettes in a store in the 30 days prior to interview reported that no one in the 30 days prior to interview refused to sell them cigarettes because of their age. Neither of these findings necessarily means that most stores in Iowa do not ask to see proof of age. Instead, it may simply be that underage store purchasers know which store to approach and always go to that store to make their purchases.

High school males who tried to make a store purchase were much more likely than their female counterparts to have been asked to show proof of age (42% vs. 23%). Also, high school males were much more likely than their female counterparts to report that someone refused to sell them cigarettes because of their age (39% vs. 20%).

**Tobacco-related Attitudes.** The vast majority (over 90%) of Iowa’s 6<sup>th</sup> through 12<sup>th</sup> grade males and females definitely or probably think that people can get addicted to tobacco just like cocaine or heroin. Less than 17% of these students definitely or probably think that young people who smoke cigarettes have more friends, but more high school males (21%) than females (11%) think that way. Even fewer (less than 13%) middle and high school students in Iowa definitely or probably think that smoking cigarettes makes young people

look cool or fit in. Again, however, more high school males (16%) than females (7%) think that way. Over 88% of both middle and high school males and females definitely or probably think that young people risk harming themselves if they smoke from 1-5 cigarettes per day. However, more high school (94%) than middle school (89%) students think that way, with only small sex differences. Less than 14% of middle and high school students definitely or probably think it is safe to smoke only a year or two as long as you quit after that. More high school males (16%) than females (9%) think that way. Over 89% of both middle and high school males and females definitely or probably think smoke from other peoples cigarettes is harmful to them. However, more high school than middle school students feel that way (95% vs. 90%). Finally, 75% or more of both middle and high school students think that tobacco companies, more than other companies, have tried to mislead young people to buy their products. More middle school than high school students feel that way (84% vs. 76%) and the sex differences are minimal.

**Tobacco Exposure.** Most of Iowa's middle and high school students are exposed to role models that use tobacco products. Over 81% of middle and high school students watch TV or movies that most or some of the time include actors who use tobacco. Over 25% watch TV that most or some of the time shows athletes using tobacco and over 21% see internet ads for tobacco products. Over 80% of both male and female middle and high school students report that they some or most of the time see tobacco product ads when they go to a convenience store, supermarket or gas station. Middle school males report seeing such ads the least (83%) and high school females the most (93%).

Over 20% of Iowa's 6<sup>th</sup> through 12<sup>th</sup> graders have received something in the past 12 months that had a tobacco company name or picture on it. Over half (54%) of high school students report that one or more of their four closest friends smoke and 28% of middle school students report a similar relationship. Over one quarter (26%) of high school students and over one tenth (13%) of middle school students report that one or more of their four closest friends use smokeless tobacco. Finally, nearly half (46% of middle school students and 41% of high school students) report that they live with someone who currently smokes cigarettes.

**Tobacco Prevention Activity Exposure.** The vast majority of both Iowa's middle and high school students have been exposed to commercials that focus on the dangers of cigarette smoking (87% of high school students and 80% of middle school students). Most have also been exposed to anti-smoking TV news stories or programs (68% of both middle and high school students, as well as admonitions from a parent/guardian regarding the dangers of tobacco use (66% of high school students and 71% of middle school students). Less than half, however, remember being exposed to a current year school program where students practiced saying "NO" to tobacco use (45% of middle school students and only 13% of high school students) or remember participating in a community program in the past 12 months to discourage young people from using tobacco (19% of middle school students and only 11% of high school students).

## **Conclusions/Implications**

Tobacco product experimentation by Iowa's 6<sup>th</sup> through 12<sup>th</sup> graders is widespread (an estimated 167,203 students). There is an obvious need to develop primary prevention programs that would reduce tobacco product experimentation. The primary prevention programs that are developed should target cigarette use, and resources should be equally allocated to both males and females.

Current use of any tobacco product by Iowa's middle (6<sup>th</sup> through 8<sup>th</sup> grade students) and high school (9<sup>th</sup> through 12<sup>th</sup> grade students) is somewhat higher than the national average, an obvious cause for some concern that reinforces the need for primary prevention. Current use of bidis and kreteks (fruit and candy flavored tobacco cigarettes) is low in Iowa, but they could become the "gateway" tobacco products for young Iowans. Both the supply of, and demand for, these imported tobacco products should be monitored very closely.

Current tobacco product use increases with each progression in grade level. Males report the largest increases from 6<sup>th</sup> to 7<sup>th</sup> grade, 8<sup>th</sup> to 9<sup>th</sup> grade and from 9<sup>th</sup> to 10<sup>th</sup> grade. Females report the largest increases from 7<sup>th</sup> to 8<sup>th</sup> and from 9<sup>th</sup> to 10<sup>th</sup>. Obviously, prevention programs are needed at every grade level, but 9<sup>th</sup> grade appears to be a critical point in time to expose both males and females to prevention programs.

While many students who experiment with tobacco products do not move from the experimental phases of tobacco use to regular and/or dependent use in grades 6 through 12, there is evidence to suggest that over 15% do. All the tobacco product experimenters need to be exposed to secondary prevention programs that are designed to keep them from going beyond the experimental stage of use. It is estimated that about 25,000 middle and high school students in Iowa are currently dependent on a tobacco product, and it is estimated that nearly half of these users will be killed by their habit, losing an average of 20-25 years of nonsmoking life expectancy. Clearly any effort to reduce these outcomes would be beneficial.

There is every indication to believe that tobacco product use is not going away in the near future. Program planners, both prevention and treatment, need to be aware that an estimated 80,156 of Iowa's middle and high school students expect to be smoking cigarettes one year into the future and 49,741 think they will be smoking five years into the future. Females are just as likely, or even slightly more likely, to think they will be smoking in the future.

Iowa's middle and high school students, both males and females, are widely exposed to second hand smoke. Half or more of all students report second hand smoke exposure, being present on one or more of the last seven days in either a room or car with a smoker. The extent of the danger posed by this exposure is uncertain, but it is likely that programs designed to reduce this exposure would reduce health-related costs in the future.

The Marlboro brand of cigarettes is clearly the most popular brand in Iowa, enjoying the allegiance of 72% of high school current smokers and 59% of middle school current smokers.

Iowa's middle and high school smokers do **not** appear to favor menthol cigarettes. It is unknown how Marlboro has achieved such a dominant brand preference in Iowa, but its success obviously makes it a prime target for tobacco reduction programs.

About half of Iowa's middle and high school current cigarette smokers, both male and female, express a desire to quit smoking and over 70% think they probably or definitely could quit. This is despite the fact that over 40% have tried to quit two or more times. There does appear to be some discrepancy between what several of Iowa's students think they can do and what they have in fact failed to do in the past.

Most of Iowa's middle and high school students who smoke and are under age 18 (the legal purchasing age for cigarettes) usually obtain their cigarettes from acquaintances – others buy for them or borrow from others. Interestingly, very few underage smokers usually obtain their cigarettes from a vending machine. Programs that would discourage Iowa's older students from letting their younger peers use them as resources to obtain tobacco products would obviously be beneficial.

When Iowa's underage smokers last purchased a pack of cigarettes, they most often obtained them at a gas station, convenience store, or "other" place. Also, most underage smokers who tried to buy cigarettes in a store were not asked to show proof of age and most had never been refused a cigarette sale because of their age, especially females. While it is not possible to tell from this survey exactly how many stores allow illegal tobacco sales, it is apparent that underage smokers do have ready access to tobacco products in some of Iowa's stores. The prevention of underage tobacco sales should be a priority and perhaps new policies and stricter enforcement need to be adopted, especially for gas stations and convenience stores.

Most of Iowa's middle and high school students have appropriate tobacco-related attitudes that should discourage their use of tobacco products. Still, for one reason or another, the majority of Iowa's students do experiment with tobacco products. Obviously, while it is important that students understand that: tobacco can be addictive; smoking does not produce friends; smoking is not cool; smoking can be harmful, and tobacco companies have tried to mislead young people into buying their products - there must be other attitudes that influence the decision to use tobacco products. These attitudes need to be identified and added to the educational programs that discourage tobacco use.

Other factors that might mitigate the impact of the attitudes described above include tobacco product ad exposure and tobacco-using role model exposure. There is plenty of evidence that Iowa's middle and high school students are widely exposed to tobacco product ads and tobacco-using role models and peers. Reducing this exposure in stores, movies and TV, as well as at home and among peers, would most likely be beneficial.

Finally, it is apparent that Iowa's middle and high school students are exposed to national media campaigns, TV programs and news stories that focus on the dangers of smoking. Still, again, most have at least experimented with tobacco product use. Iowa's students are less widely exposed to parental/guardian admonitions regarding tobacco product use and more

parents should be encouraged to provide such information. Less than half of Iowa's students remembered participating in a current school year role playing exercise that helps students say "NO" to tobacco use and even fewer remembered participating in a community program designed to discourage young people from smoking. Assuming that it is never too late to benefit from tobacco prevention exposure, there is a need for more tobacco product prevention programs for every grade at the local level: family, school and community.

In short, the Iowa Youth Tobacco Survey (IYTS) clearly indicates a widespread need for primary and secondary tobacco prevention programs in Iowa, as well as treatment intervention programs, that can help Iowa's middle and high school students avoid tobacco product use and/or quit using tobacco products. It is also apparent that some needs are greater than others and that programs can be targeted in ways to maximize their benefit.

Still, the need for more information to better match resources to the areas of most need and to identify productive tobacco product reduction programs is also apparent. Should resources be available, the following data collection and analysis options should be considered:

The IYTS sample was too small to provide geographic or race/ethnicity tobacco-related prevalence rates. Another youth survey, the 1999 Iowa Youth Survey, while much more restrictive in terms of the number and kinds of tobacco-related questions included, did have a large enough sample to provide some basic tobacco-related prevalence rate estimates for 6<sup>th</sup>, 8<sup>th</sup> and 11<sup>th</sup> graders at a county level of analysis, as well as race/ethnicity-based estimates. Such estimates would provide some very useful tobacco control needs assessment-related data. Program planners could allocate resources to those geographic areas that are most in need, as well as identify those race/ethnic groups in Iowa that might present special needs.

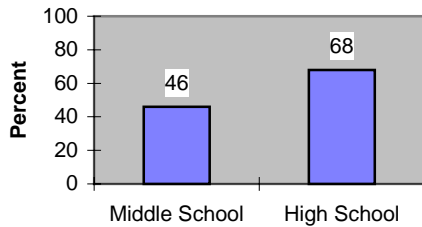
The descriptive analyses to date provide few clues as to how the questions in the 2000 IYTS are related to each other. The next stage of IYTS data analysis should include correlation analyses. The identification of the kinds and degrees of correlations between the IYTS questions would help program planners make maximum use of the resources available. For example, the identification of which tobacco-related attitudes have the most impact on tobacco-related behaviors would help identify what kinds of education programs have the best potential to reduce tobacco product use.

Finally, if resources are to continue to be matched to needs, the tobacco-related attitudes and behaviors of Iowa's middle and high school students must be monitored over time. Also, if any progress is to be made in identifying which of the tobacco-related prevention and intervention programs that might be developed have the most impact, it will be necessary to monitor the tobacco-related beliefs and behaviors of Iowa's students over time. The administration of another IYTS survey should be considered at some point in the future.

# 2000 IOWA YOUTH TOBACCO SURVEY FINDINGS

## LIFETIME TOBACCO USE PREVALENCE RATES: Middle and High School (Total and by Sex)

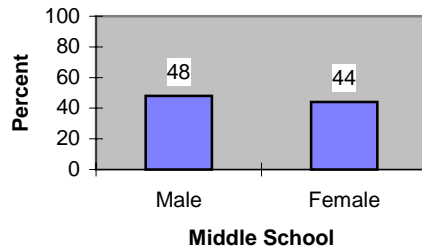
**Figure 1. Ever Use Any Tobacco Products (In Percent)**



68% of Iowa's high school students (an estimated 112,065 students in grades 9 through 12) have tried some kind of tobacco product in their lifetime.<sup>1</sup>

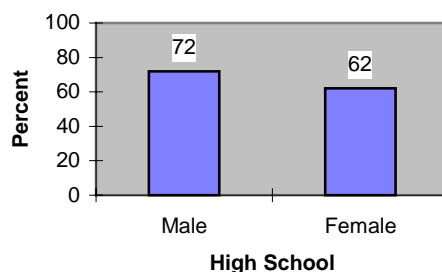
46% of Iowa's middle school students (an estimated 55,138 students in grades 6 through 8) have tried some kind of tobacco product in their lifetime.<sup>1</sup>

**Figure 2. Middle School: Ever Use Any Tobacco Products by Sex (In Percent)**

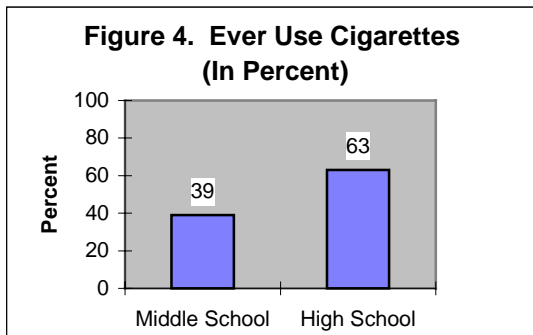


Middle school males were only slightly more likely than middle school females to have tried some kind of tobacco product in their lifetime.

**Figure 3. High School: Ever Use Any Tobacco Products by Sex (In Percent)**

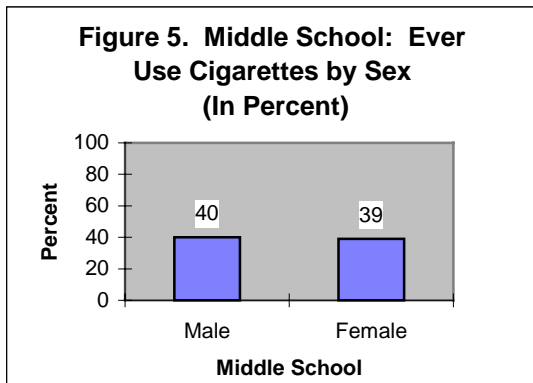


The difference in lifetime use of any tobacco product between males and females is larger in the high school sample than in the middle school sample. Perhaps each new generation of females is narrowing the traditional sex difference, but only trend data can confirm that this is the case.

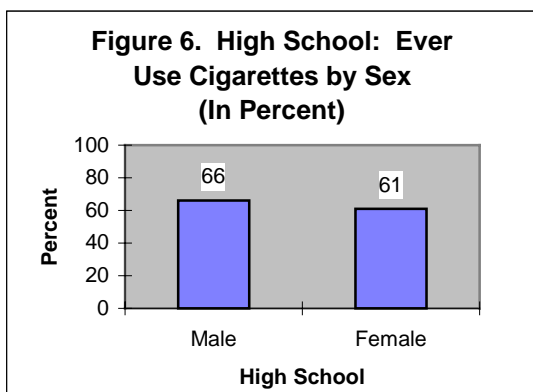


Of the 68% of Iowa’s high school students who have experimented with some kind of tobacco product in their lifetime, the vast majority have included cigarettes in their experimentation. 63% of Iowa’s high school students (an estimated 103,825 students) have tried cigarettes in their lifetime.<sup>1</sup>

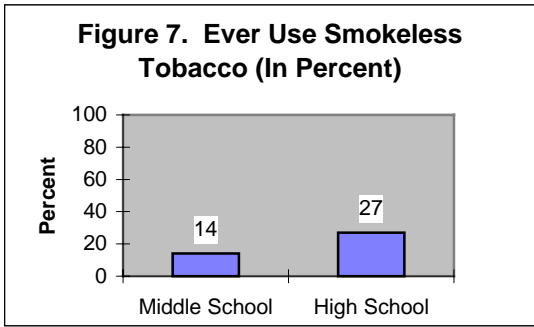
Similarly, most middle school students who have tried some kind of tobacco product in their lifetime included cigarettes in their experimentation. 39% of Iowa’s middle school students (an estimated 46,747 students) have tried cigarettes in their lifetime.<sup>1</sup>



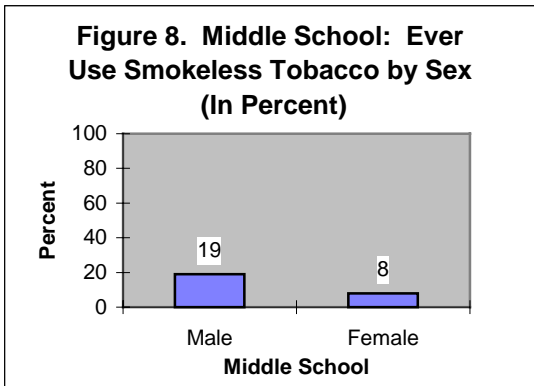
Middle school males and females were nearly equally likely to have tried cigarettes in their lifetime.



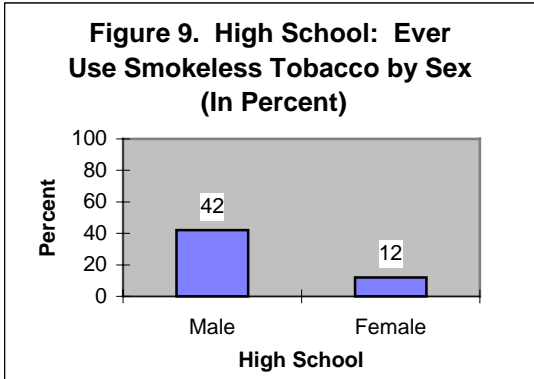
The difference in lifetime use of cigarettes between males and females is larger in the high school sample than in the middle school sample. Again the new generations of females may be narrowing the traditionally large gap between the sexes.



Smokeless tobacco experimentation occurs much less often than smoking tobacco experimentation. Still, 27% of Iowa's high school students (an estimated 44,496 students) and 14% of middle school students (an estimated 16,781 students) have tried smokeless tobacco at some time in their lifetime.<sup>1</sup>

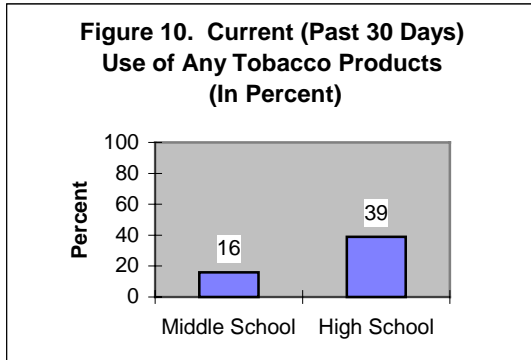


Middle school males are more than twice as likely as middle school females to have ever tried smokeless tobacco. The sex differences remain quite large for this tobacco product.



High school males are more than three times as likely as their female counterparts to have ever tried smokeless tobacco. Again, while the sex differences remain quite large for this tobacco product, there is some evidence that those differences are narrowing with each generation of new students.

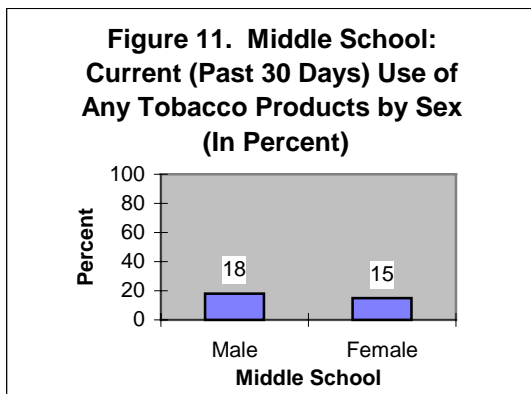
**CURRENT (PAST 30 DAYS) TOBACCO USE PREVALENCE RATES: Middle and High School (Total and by Sex)**



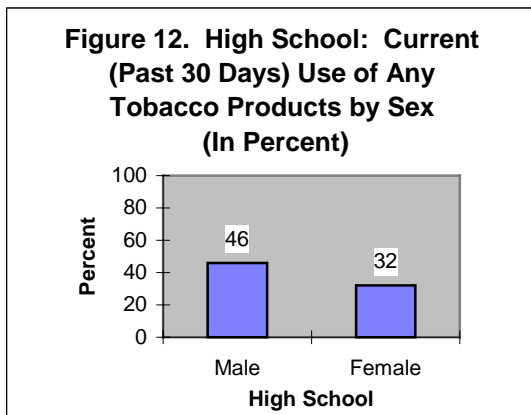
Current (past 30 days) use of any type of tobacco product is reported by 39% of Iowa’s high school students (an estimated 64,273 students in grades 9 through 12).<sup>1</sup> This is just over half (57%) of high school students who reported ever using any type of tobacco product.

Current (past 30 days) use of any type of tobacco product is reported by 16% of Iowa’s middle school students (an estimated 19,178 students in grades 6 through 8).<sup>1</sup> This is just over one third of the middle school students who reported ever using any type of tobacco product.

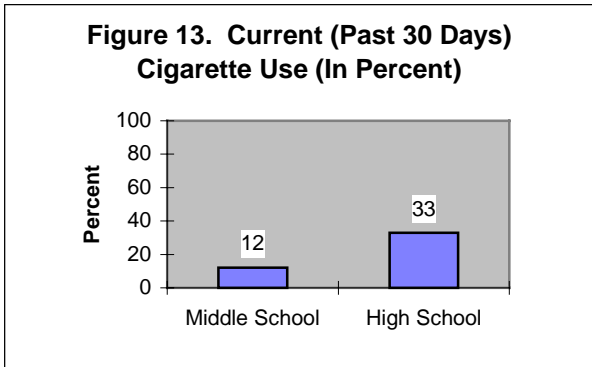
The Iowa middle school and high school current tobacco product use prevalence rates are slightly higher than the national estimates (13% and 35% respectively).<sup>2</sup>



Middle school males were only slightly more likely than middle school females to report current (past 30 days) use of any tobacco product.



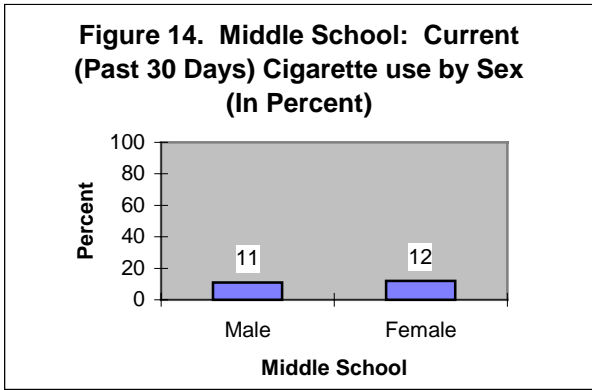
The sex difference in current (past 30 days) use of any tobacco product is much larger for the high school than the middle school sample. Again, this could indicate that with each new generation, the traditionally large sex gap is narrowing.



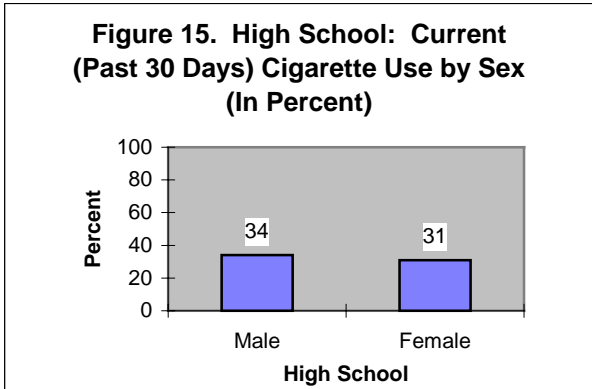
Current (past 30 days) cigarette use was reported by 33% of Iowa’s high school students (an estimated 54,385 students in grades 9 through 12).<sup>1</sup> This is a little more than one half of the high school students who reported they had ever used cigarettes.

Current (past 30 days) cigarette use was reported by 12% of Iowa’s middle school students (an estimated 14,384 students in grades 6 through 8).<sup>1</sup> This is less than one third of the middle school students who reported they had ever used cigarettes.

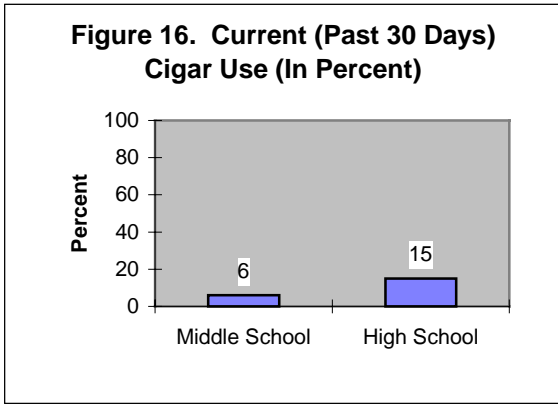
Again, the Iowa middle school and high school current cigarette use prevalence rate estimates are somewhat higher than those for the nation (9% and 28% respectively).<sup>2</sup>



Slightly more middle school females than males (12% and 11% respectively) reported current cigarette use.



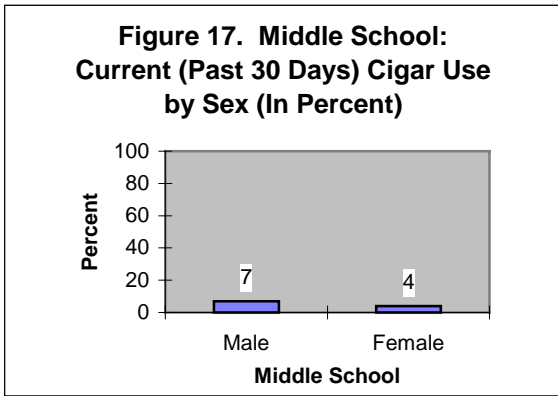
Slightly more high school males (34%) than females (31%) reported current cigarette use. There is some evidence here that the newer generations of females are actually on the verge of surpassing the males in terms of current cigarette use.



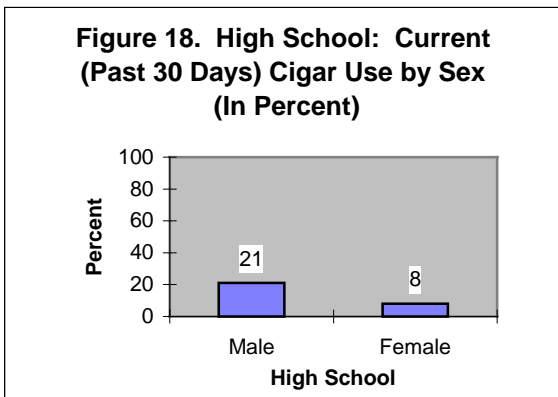
15% of Iowa’s high school students (an estimated 24,720 students in grades 9 through 12) report that they currently (past 30 days) smoke cigars.<sup>1</sup>

6% of Iowa’s middle school students (an estimated 7,192 students in grades 6 through 8) report that they currently smoke cigars.<sup>1</sup>

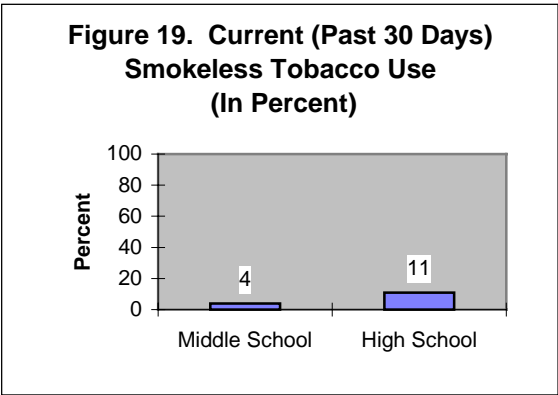
The Iowa middle and high school current cigar use prevalence rates are identical to the national estimates (6% and 15% respectively).<sup>2</sup>



Iowa’s middle school males are almost twice as likely to report current cigar use as their female counterparts (7% and 4% respectively).



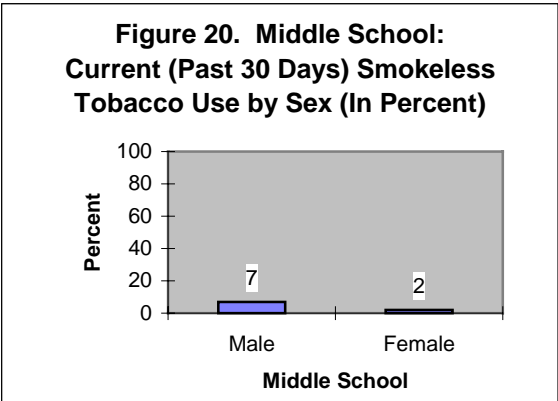
Iowa’s high school males are nearly three times as likely as their female counterparts to report current cigar use (21% and 8% respectively). Again, while not conclusive, there does appear to be a narrowing of the sex differences in current cigar use among the younger generations.



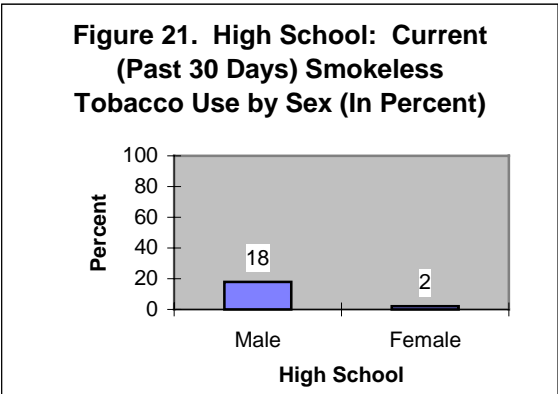
Current (past 30 days) use of smokeless tobacco is reported by 11% of Iowa’s high school students (an estimated 18,128 students in grades 9 through 12).<sup>1</sup> This is less than half (41%) of the high school students who reported ever using smokeless tobacco.

Current use of smokeless tobacco is reported by 4% of Iowa’s middle school students (an estimated 4,795 students in grades 6 through 8).<sup>1</sup> This is a little more than one quarter (29%) of the middle school students who reported ever using smokeless tobacco.

The Iowa middle and high school current smokeless tobacco prevalence rates are somewhat higher than those for the nation (3% and 7% respectively).<sup>2</sup>



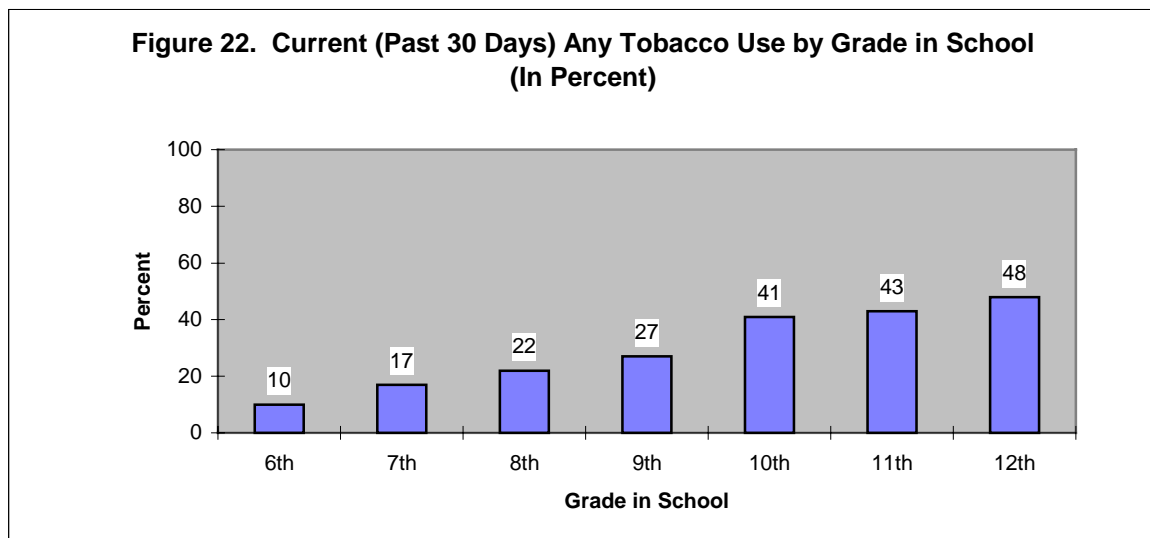
Nearly four times as many middle school males as females report current smokeless tobacco use.



Nine times as many high school males as females report current smokeless tobacco use. Again, even though the sex differences remain large for current smokeless tobacco use, there is some evidence that the sex differences are narrowing with the new generations of users.

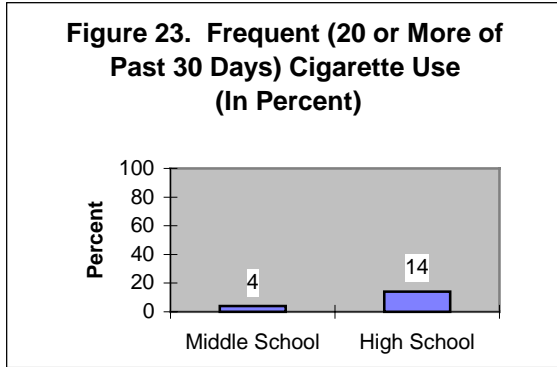
Current (past 30 days) use of the remaining types of tobacco products included in the 2000 Iowa Youth Tobacco Survey - pipe smoking tobacco, as well as bidis and kreteks (fruit and candy flavored cigarettes with actual tobacco in them) - was reported by less than 5% of Iowa's middle and high school students. Interestingly, there was no difference between middle and high school reported pipe smoking tobacco and bidi use, both being 4%. Kretek use was also rare, with 4% of high school students and 3% of middle school students reporting current kretek use. Males were more likely to report the use of all three of these types of tobacco products. Despite their current low level of use in Iowa, these imported tobacco products could well become the "gateway" tobacco products for adolescents and both the supply of, and demand for, these imported tobacco products should be monitored very closely.

Figure 22 below clearly shows a stair step relationship between grade in school and current (past 30 days) use of any tobacco product.



The rate of use increases with each grade, with the largest increase occurring from 9<sup>th</sup> to 10<sup>th</sup> grade and the smallest increase from 10<sup>th</sup> to 11<sup>th</sup> grade. A stair step relationship between grade in school and any current tobacco use existed for both males and females, but there were some differences in terms of when the largest increases occurred. The males recorded the largest increases from 6<sup>th</sup> to 7<sup>th</sup> grade (10% vs. 21%), from 8<sup>th</sup> to 9<sup>th</sup> grade (23% vs. 31%) and from 9<sup>th</sup> to 10<sup>th</sup> grade (31% vs. 50%). The females, on the other hand, recorded the largest increases from 7<sup>th</sup> to 8<sup>th</sup> grade (14% vs. 22%) and from 9<sup>th</sup> to 10<sup>th</sup> grade (23% vs. 31%).

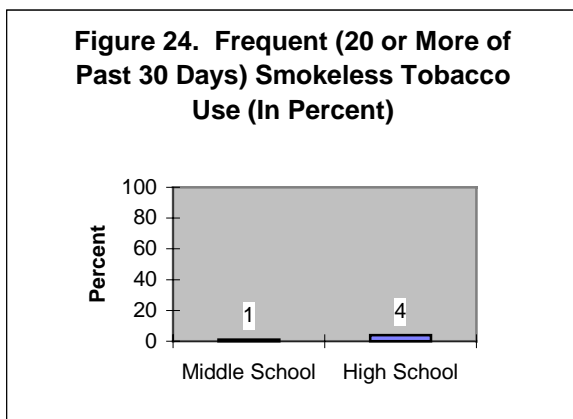
**FREQUENT (20 OR MORE OF PAST 30 DAYS) TOBACCO USE PREVALENCE RATES:  
Middle and High School (Total and by Sex)**



14% of Iowa’s high school students (an estimated 23,072 students in grades 9 through 12) smoked cigarettes on 20 or more of the last 30 days.<sup>1</sup> This is a little less than half (42%) of the high school students who reported current (past 30 days) cigarette use.

4% of Iowa’s middle school students (an estimated 4,795 students in grades 6 through 8) smoked cigarettes on 20 or more of the last 30 days.<sup>1</sup> This is one third (33%) of the middle school students who reported current (past 30 days) cigarette use.

Middle school males were only slightly more likely than their female counterparts to be frequent (20 or more days of the past 30 days) cigarette smokers (4% vs. 3%). High school females report a somewhat higher frequent use of cigarettes than their male counterparts (16% vs. 13%). This is one of the few instances where female rates were higher than male rates and where sex differences between the older high school generation and the younger middle school generation are reversed.

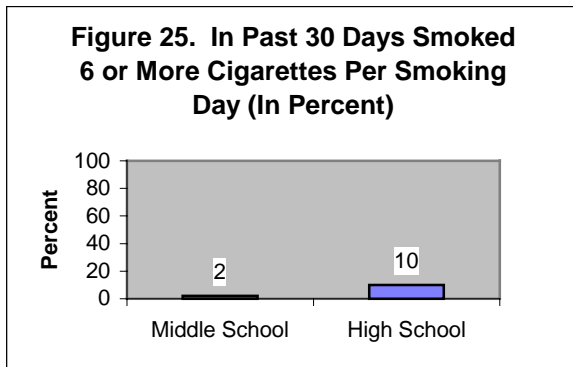


4% of Iowa’s high school students (an estimated 6,592 students in grades 9 through 12) used smokeless tobacco on 20 or more of the last 30 days.<sup>1</sup> This is a little more than one third (36%) of the high school students who reported current (past 30 days) smokeless tobacco use.

1% of Iowa’s middle school students (an estimated 1,199 students in grades 6 through 8) used smokeless tobacco on 20 or more of the last 30 days.<sup>1</sup> This is one quarter (25%) of the middle school students who reported current (past 30 days) smokeless tobacco use.

Middle school male students were slightly more likely than their female counterparts to frequently use smokeless tobacco (1% vs. 0.3%). High school males were much more likely than their female counterparts to frequently use smokeless tobacco (6% vs. 0.3%).

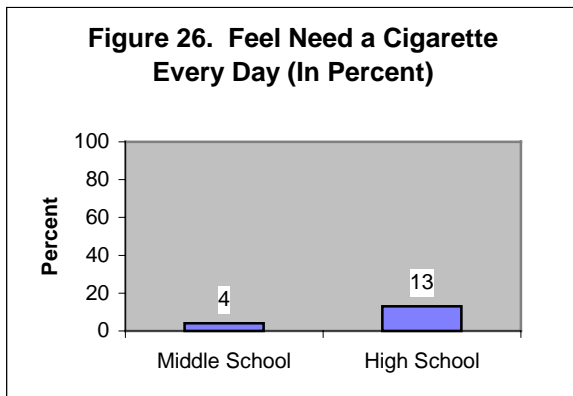
**TOBACCO DEPENDENCE PREVALENCE RATES: Middle and High School (Total and by Sex)**



10% of Iowa’s high school students (an estimated 16,480 students in grades 9 through 12) smoked six or more cigarettes per smoking day in the past 30 days.<sup>1</sup> This is a little less than one third (30%) of the high school students who reported current (past 30 days) cigarette use.

2% of Iowa’s middle school students (an estimated 2,397 students in grades 6 through 8) smoked six or more cigarettes per smoking day in the past 30 days.<sup>1</sup> This is 17% of the middle school students who reported current (past 30 days) cigarette use.

Middle school female students were slightly more likely than their male counterparts to smoke six or more cigarettes per smoking day (3% vs. 2%). High school female students were also slightly more likely than their male counterparts to smoke six or more cigarettes per smoking day (10% vs. 9%).

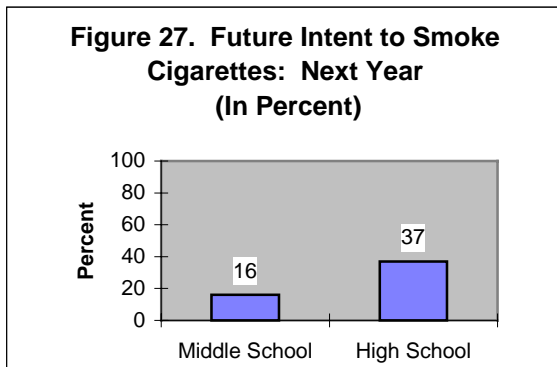


13% of Iowa’s high school students (an estimated 21,424 students in grades 9 through 12) felt they could not go for a whole day without smoking a cigarette.<sup>1</sup> This is a little more than one third (39%) of the high school students who reported current (past 30 days) cigarette use.

4% of Iowa’s middle school students (an estimated 4,795 students in grades 6 through 8) felt they could not go for a whole day without smoking a cigarette.<sup>1</sup> This is one third (33%) of the middle school students who reported current (past 30 days) cigarette use.

Middle school female students were slightly more likely than their male counterparts to feel that they needed a cigarette every day (5% vs. 3%). High school female students were also slightly more likely than their male counterparts to feel that they needed a cigarette every day (14% vs. 13%).

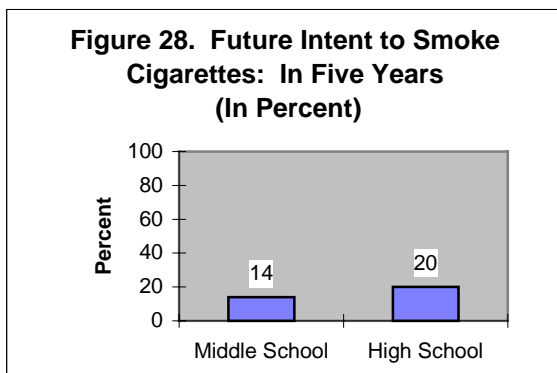
**PROJECTED FUTURE TOBACCO USE PREVALENCE RATES: Middle and High School**  
(Total and by Sex)



37% of Iowa’s high school students (an estimated 60,977 students in grades 9 through 12) plan on being cigarette smokers in the next year.<sup>1</sup> This is a little more than half (59)% of the high school students who ever smoked a cigarette and somewhat more (37% vs. 33%) than are current (past 30 days) cigarette smokers.

16% of Iowa’s middle school students (an estimated 19,178 students in grades 6 through 8) plan on being cigarette smokers in the next year.<sup>1</sup> This is a little less than half (41)% of the middle school students who ever smoked a cigarette and somewhat more (16% vs. 12%) than are current (past 30 days) cigarette smokers.

Middle school females are slightly more likely than their male counterparts (17% vs. 16%) to report that they will be smoking cigarettes next year. High school males and females are equally likely to report that they will be smoking cigarettes next year.

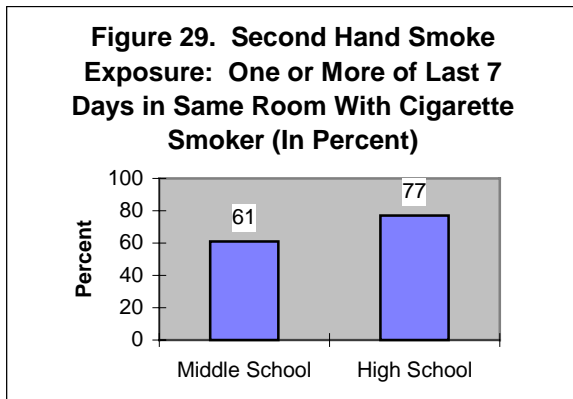


20% of Iowa’s high school students (an estimated 32,960 students in grades 9 through 12) plan on being cigarette smokers five years from the present.<sup>1</sup> This is over half (54)% of the high school students who think they will be smoking cigarettes one year from the present. It does appear to be evident that at least several of the high school students intend to quit smoking by the time they reach their late twenties.

14% of Iowa’s middle school students (an estimated 16,781 students in grades 6 through 8) plan on being cigarette smokers five years from the present.<sup>1</sup> This is nearly the same percentage of middle school students who think they will smoke cigarettes one year from the present (14% vs. 16%). It does appear that middle school students who expect to be smoking next year are quite likely to think they will be smoking in high school as well.

Middle school females are slightly more likely than their male counterparts (14% vs. 13%) to report that they will be smoking cigarettes five years from the present. High school females are also slightly more likely than their male counterparts (20% vs. 19%) to report that they will be smoking cigarettes five years from the present.

**SECOND HAND SMOKE EXPOSURE: Middle and High School (Total and by Sex)**

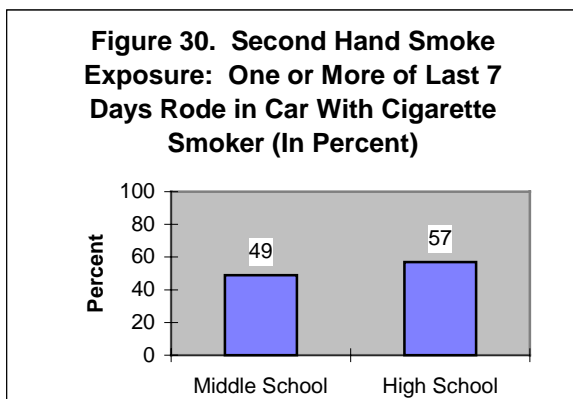


Over three quarters (77%) of Iowa’s high school students (an estimated 126,897 students in grades 9 through 12) reported they spent one or more of the last seven days in a room with a person who was smoking.<sup>1</sup>

Second hand smoke exposure was less in the middle school, but still well over half (61%) of middle school students (an estimated 73,118 students in grades 6 through 8) reported they spent one or more of the last seven days in a room with a person who was smoking.<sup>1</sup>

Obviously, second hand smoke exposure is very prevalent among Iowa’s 6<sup>th</sup> through 12<sup>th</sup> graders.

Female middle school students are more likely than the males to have been in a room with a smoker (64% vs. 59%). Female high school students are only slightly more likely than their male counterparts to be exposed to this kind of second hand smoke (78% vs. 76%).



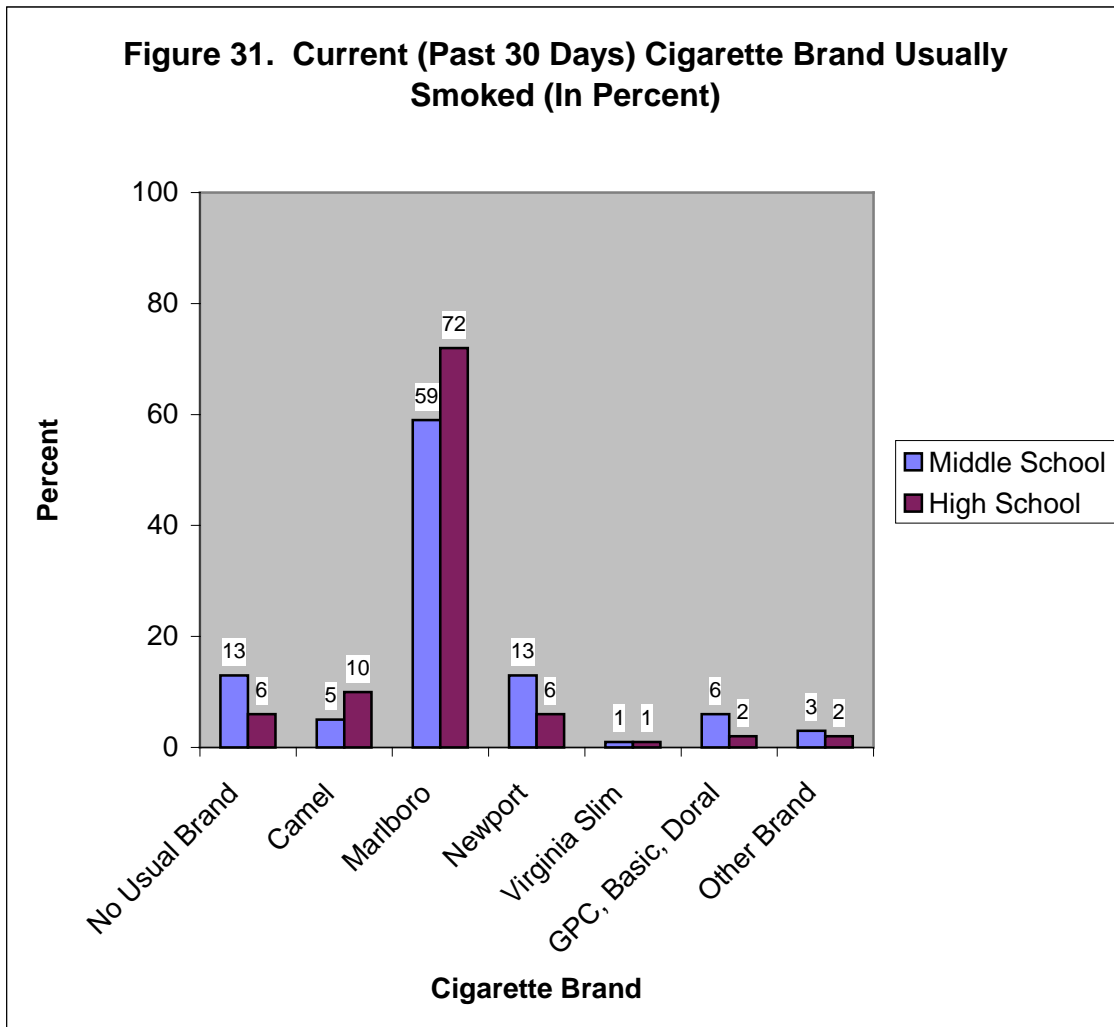
Over half (57%) of Iowa’s high school students (an estimated 93,937 students in grades 9 through 12) reported they spent one or more of the last seven days in a car with a person who was smoking.<sup>1</sup>

Nearly half (49%) of Iowa’s middle school students (an estimated 58,734 students in grades 6 through 8) reported they spent one or more of the last seven days in a car with a person who was smoking.<sup>1</sup>

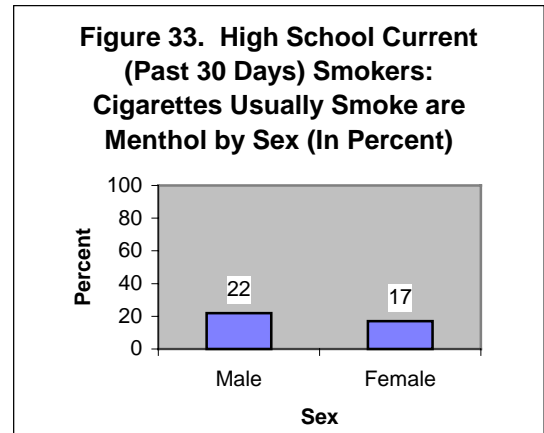
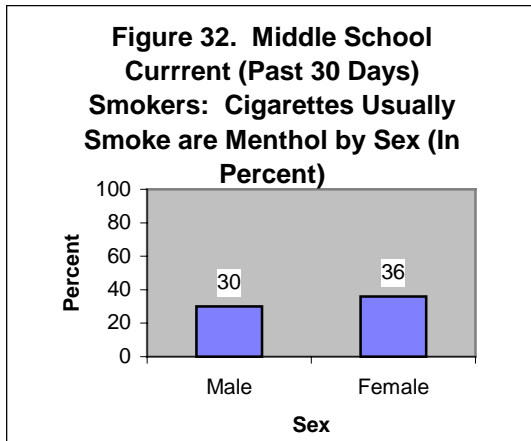
Female middle school students are more likely than the males to have been in a car with a smoker (51% vs. 47%). Female high school students are slightly less likely than their male counterparts to be exposed to this kind of second hand smoke (56% vs. 57%).

**TOBACCO BRAND PREFERENCES:** Middle and High School Current Smokers (Total and by Sex)

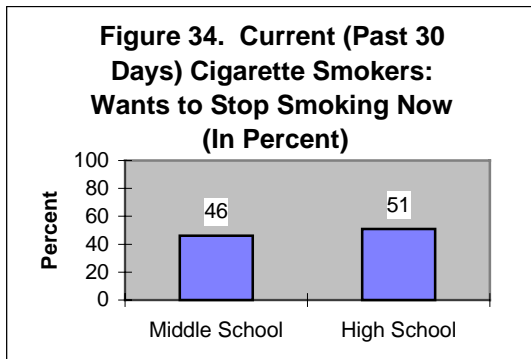
As evidenced in Figure 31 below, Iowa’s current (past 30 days) middle and especially high school cigarette smokers prefer the Marlboro brand of cigarettes by a wide margin over all the others. “No usual brand,” Newport and GPC, Basic or Doral are somewhat more popular among middle school smokers than high school smokers. Camels, on the other hand are not as popular with middle school smokers as they are with high school smokers. The middle school male and female brand preferences were generally similar to each other, but more middle school male smokers than female smokers preferred Camels (8% vs. 3%) and more middle school females preferred Marlboros (61% vs. 56%) and Newports (17% vs. 10%). The high school male and female brand preferences were also similar to each other, but more high school male smokers than female smokers preferred Camels (13% vs. 8%) and Newports (9% vs. 4%) and more high school females preferred Marlboros (80% vs. 65%).



As evidenced in Figures 32 and 33 below, most of Iowa's current (past 30 days) middle and high school smokers do not usually smoke menthol cigarettes. Middle school female current smokers are more likely than their male counterparts to smoke menthol cigarettes (36% vs. 30%), but more high school males than females smoke menthol cigarettes (22% vs. 17%).



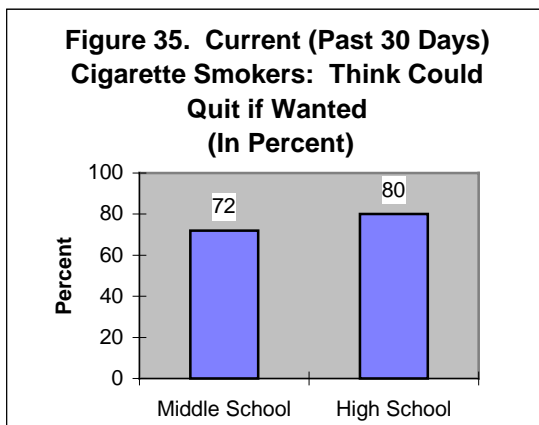
**QUITTING EXPERIENCES:** Middle and High School Current Smokers (Total and by Sex)



Slightly over half (51%) of the high school students who are current (past 30 days) cigarette smokers expressed a desire to stop smoking at the time of interview.

Fewer, less than half (46%) of the middle school students who are current cigarette smokers wanted to stop smoking at the time of interview.

There were virtually no differences by sex for either middle or high school current (past 30 days) cigarette smokers. Middle school females expressed a slightly higher desire to quit (47% vs. 46%), as did high school females (52% vs. 51%).

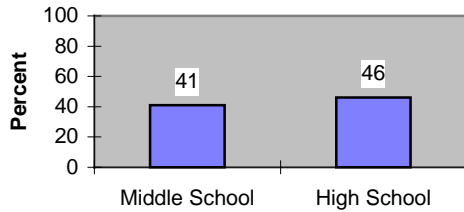


80% of the high school current (past 30 days) cigarette smokers definitely or probably think they could quit smoking cigarettes now if they wanted to.

Fewer, 72% of the middle school current cigarette smokers definitely or probably think they could quit smoking cigarettes now if they wanted to.

Males, both middle school and high school, were more likely to think they could quit smoking if they desired. 74% of middle school male current cigarette smokers felt they could quit, but only 70% of their female counterparts felt the same. High school male smokers were also more likely to think they could quit (82% vs. 77%).

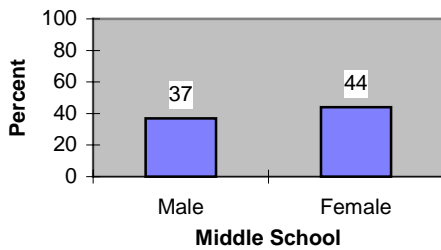
**Figure 36. Current (Past 30 Days) Cigarette Smokers: Tried Quitting Two or More Times (In Percent)**



46% of high school current (past 30 days) cigarette smokers have tried to quit smoking two or more times in their lifetime.

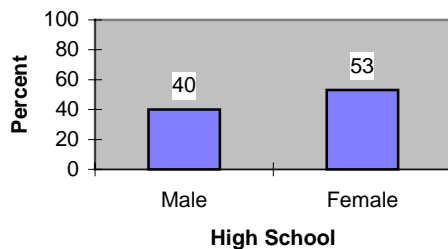
41% of middle school current cigarette smokers have tried to quit smoking two or more times in their lifetimes.

**Figure 37. Middle School Current (Past 30 Days) Cigarette Smokers: Tried Quitting Two or More Times by Sex (In Percent)**



Female middle school current cigarette smokers were more likely than their male counterparts to have tried to quit smoking two or more times in their lifetime (44% vs. 37%).

**Figure 38. High School Current (Past 30 Days) Cigarette Smokers: Tried Quitting Two or More Times by Sex (In Percent)**



There was an even larger sex difference for the high school current cigarette smokers. 53% of females reported trying to quit two or more times while only 40% of the males tried to quit two or more times.

**PURCHASING BEHAVIOR: Middle and High School Current Smokers/Smokeless Tobacco Users Under the Age of 18 (Total and by Sex)**

As evidenced in Figure 39 below, most high school current (past 30 days) cigarette smokers who are under the legal purchasing age of 18 usually get their cigarettes by having others buy them followed by borrowing from others. Middle school underage smokers are most likely to obtain their cigarettes by borrowing them, followed by others buying for them and a “other” usual means. Interestingly, vending machines are the least used resource by both middle and high school underage smokers, but middle school smokers are somewhat more likely than high school smokers to use vending machines. Stealing cigarettes is also more prevalent among middle school than high school underage smokers. On the other hand a store purchase is more likely for high school than middle school students (probably because high school students are less likely to be requested to show proof of age).

Middle school males were somewhat more likely than females to purchase cigarettes at a store (5% vs. 1%) and females were somewhat more likely to get them some “other” way (22% vs. 18%). High school females were somewhat more likely to have others buy cigarettes for them (41% vs. 36%) and high school males were somewhat more likely to have borrowed cigarettes (33% vs. 29%).

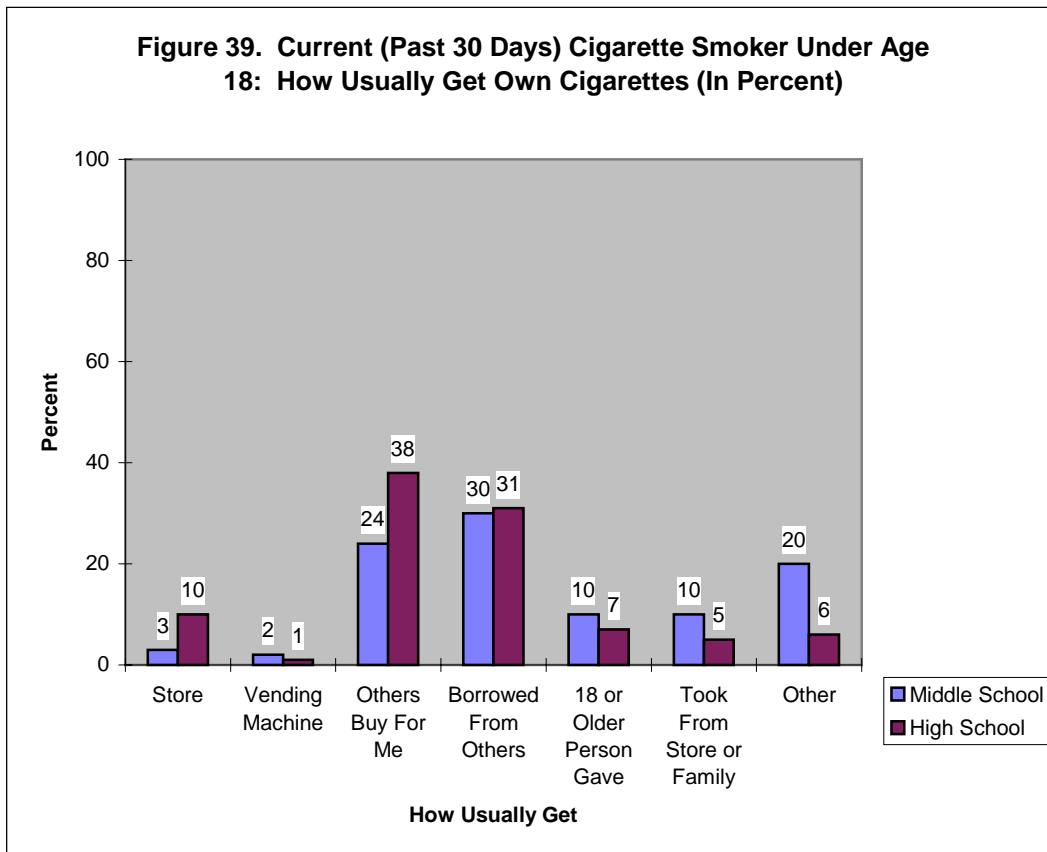
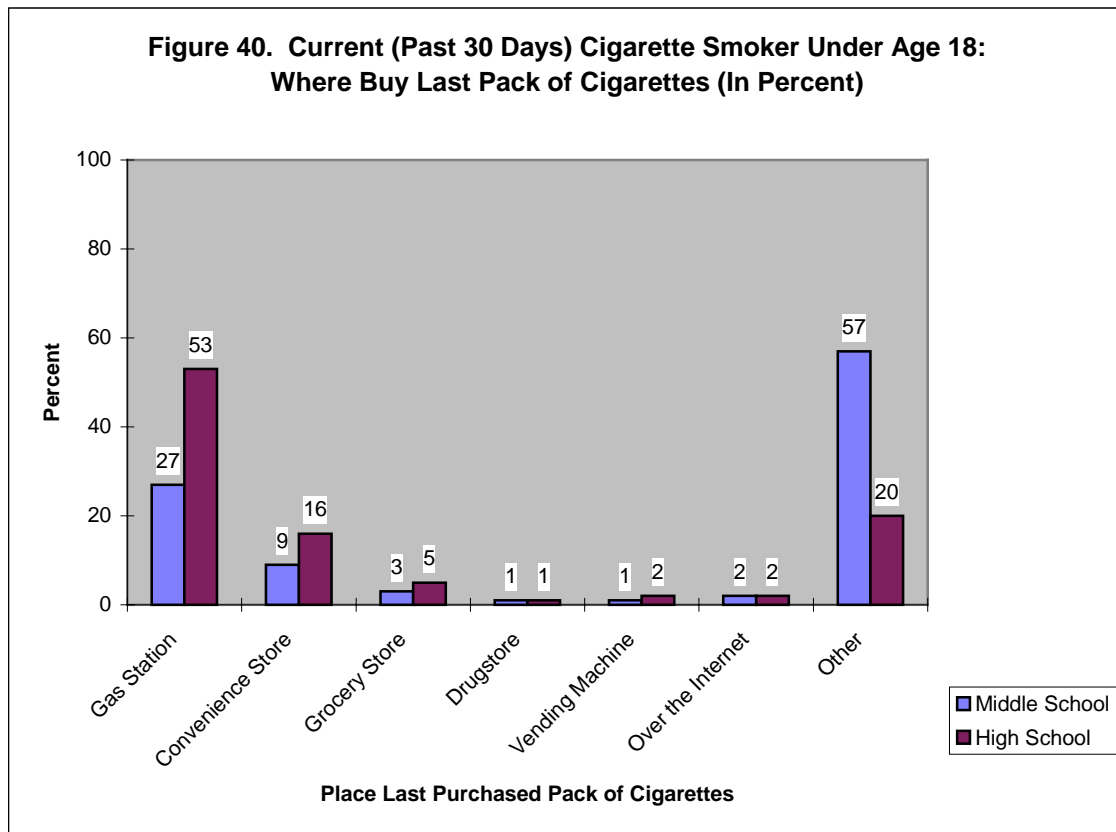
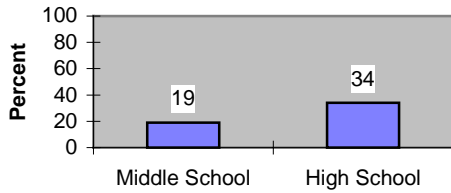


Figure 40 below shows the place where current (past 30 days) cigarette smokers under the age of 18 who bought a pack of cigarettes in the last 30 days purchased that pack of cigarettes. Underage high school cigarette smokers were most likely (53%) to purchase their last pack of cigarettes at a gas station, followed by “other” (20%) and then convenience store (16%). Middle school underage smokers were most likely to purchase their last pack of cigarettes at an “other” place (57%), followed by a gas station (27%) and then convenience store (9%). None of the other possible places of purchase accounted for more than 5% of either middle or high school underage cigarette pack purchases. Gas stations and “other” places (which need to be identified – though it is probably from friends) obviously deserve some special attention in terms of reducing cigarette sales to underage smokers.

Middle school females were more likely to have purchased their last pack of cigarettes at an “other” location (61% vs. 51%) and their male counterparts were more likely to have bought their last pack of cigarettes at a convenience store (13% vs. 6%). High school females were more likely to buy their last pack of cigarettes at a gas station (60% vs. 47%) and their male counterparts were more likely to make that purchase at a grocery store (8% vs. 2%).



**Figure 41. Current (Past 30 Days) Cigarette Smoker Under Age 18: Past 30 Days When Tried to Buy Cigarettes Ever Asked to Show Proof of Age (In Percent)**



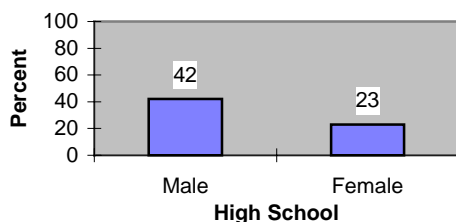
34% of high school current (past 30 days) cigarette smokers who were under the legal purchasing age of 18 and who tried to buy or bought cigarettes at a store in the 30 days prior to interview were asked at least once to show proof of age. This means, of course, that nearly two thirds of those underage smokers were not asked to show proof of age.

19% of middle school current (past 30 days) underage cigarette smokers who bought or tried to buy cigarettes at a store in the 30 days prior to interview were asked at least once to show proof of age. This means that 81% of these underage smokers were not asked to show proof of age.

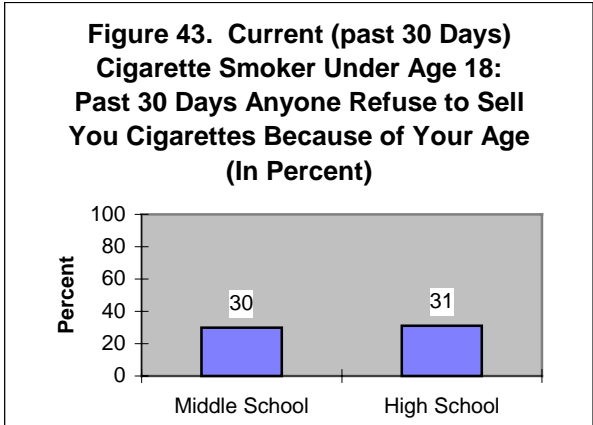
These findings must be interpreted carefully. What they may mean, more than anything else, is that underage smokers who make store purchases know which store will not ask for proof of age and always go there. The vast majority of stores in Iowa may very well request proof of age, and only a small minority may not.

There were two few middle school males and females (less than 30) who were current underage smokers and tried to buy cigarettes in a store to produce meaningful results regarding sex differences in being asked to show proof of age. There were also under 50 (38) high school females who were current underage smokers and tried to buy cigarettes in a store. While below the desired 50 cases, the sex differences (see Figure 42 below) were quite large. Because the number of high school females involved in this analysis is somewhat small, the differences observed may be exaggerated, but it is still likely that a difference does exist.

**Figure 42. High School Current (Past 30 Days) Cigarette Smoker Under Age 18: Past 30 Days When Tried to Buy Cigarettes Ever Asked to Show Proof of Age by Sex (In Percent)**

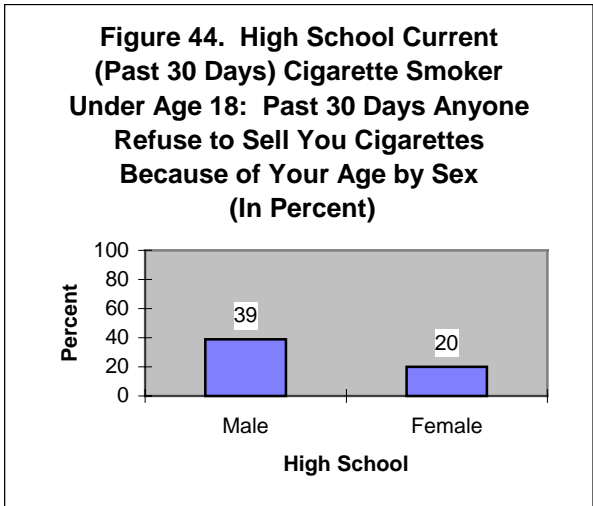


High school male current (past 30 days) cigarette smokers under the age of 18 who bought or tried to buy cigarettes in a store were much more likely than their female counterparts to have been asked at least once to show proof of age. High school females are either less likely to attempt to make a cigarette purchase in stores they are not well acquainted with or they are less likely than their male counterparts to be asked to show a proof of age in general.



31% of high school current (past 30 days) cigarette smokers who were under the legal purchasing age of 18 and bought or tried to buy cigarettes reported that someone in the 30 days prior to interview did refuse to sell them cigarettes because of their age. 30% of their middle school counterparts reported that someone in the 30 days prior to interview did refuse to sell them cigarettes because of their age.

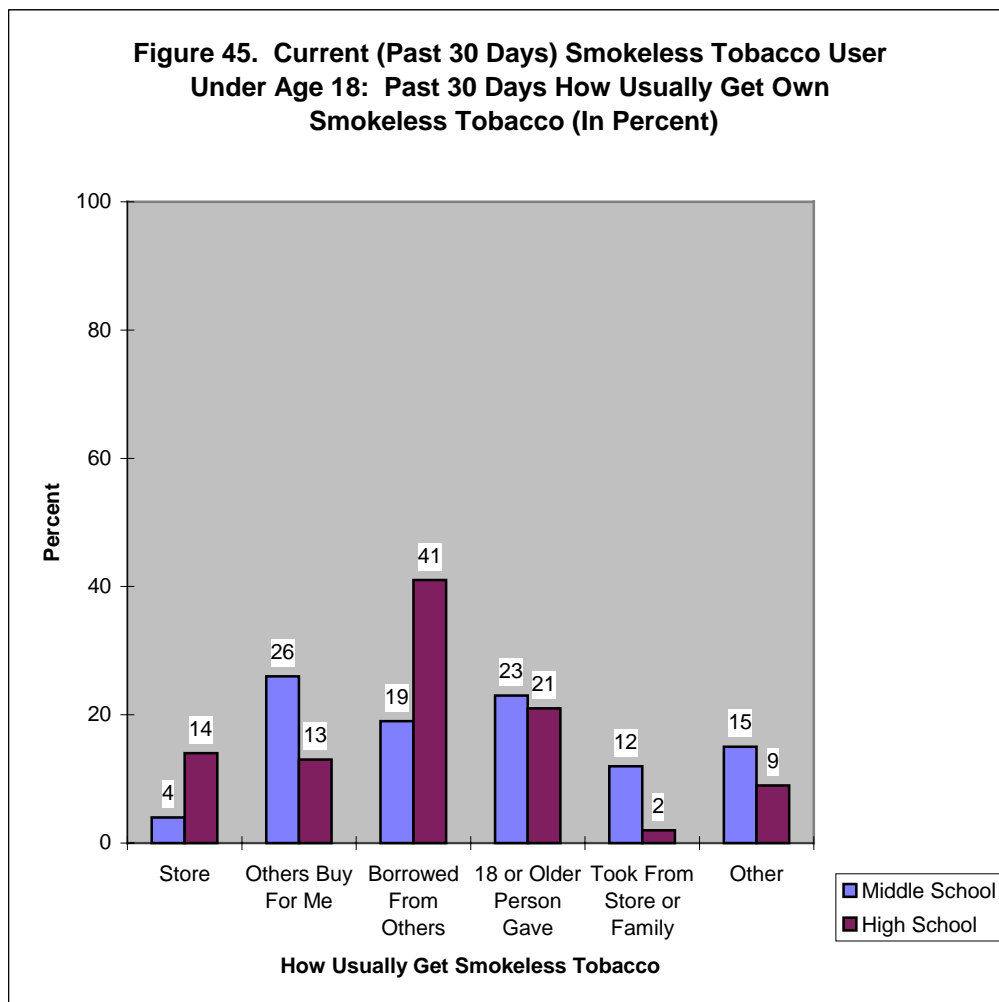
There were two few middle school males and females (less than 40) who were current underage smokers and tried to buy cigarettes in a store to produce meaningful results regarding sex differences in having been refused a cigarette sale because of their age. There were also under 50 (44) high school females who were current underage smokers and tried to buy cigarettes in a store. While below the desired 50 cases, the sex differences (see Figure 44 below) were quite large. Again, because the number of high school females involved in this analysis is somewhat small, the differences observed may be exaggerated, but it is still likely that a difference does exist.



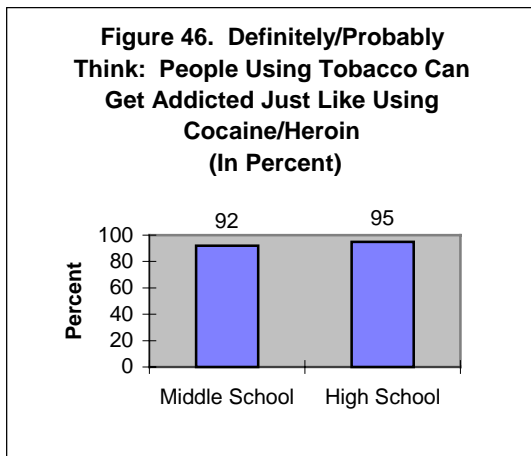
High school male current (past 30 days) cigarette smokers under the age of 18 who tried to buy cigarettes in a store were much more likely (39%) than their female counterparts (20%) to report that someone in the 30 days prior to interview refused to sell them cigarettes because of their age. Again, high school females are either less likely to attempt to make a cigarette purchase in stores they are not well acquainted with or they are less likely than their male counterparts to be asked to show a proof of age in general.

Figure 45 below shows the places where current (past 30 days) smokeless tobacco users who are under the legal purchasing age of 18 usually obtain their smokeless tobacco. Underage high school smokeless tobacco users most usually (41%) borrow from others, followed by an 18 or older person who gave it to them (21%) and then a store (14%). Their middle school counterparts are most likely to have others buy it for them (26%), followed closely by an 18 or older person who gave it to them (23%) and then borrowing from others (19%). It does appear that, like underage cigarette smokers, underage smokeless tobacco users are most likely to obtain their own smokeless tobacco from an acquaintance.

There were less than 15 middle and high school females who used smokeless tobacco and therefore no meaningful sex differences are available.



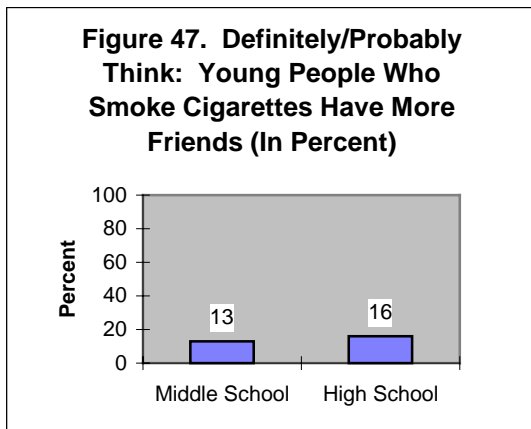
**TOBACCO-RELATED ATTITUDES: Middle and High School (Total and by Sex)**



95% of Iowa’s high school students definitely or probably think that people can get addicted to using tobacco just like they can get addicted to using cocaine or heroin. 79% definitely think that is possible.

92% of Iowa’s middle school students definitely or probably think that people can get addicted to using tobacco just like they can get addicted to using cocaine or heroin. 75% definitely think that is possible.

The sex differences are small, with females being somewhat more likely than males to think tobacco can be addictive. 95% of middle school females think tobacco can be addictive compared to 89% of their male counterparts. 98% of high school females think tobacco can be addictive compared to 93% of their male counterparts.

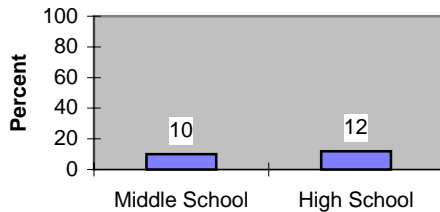


16% of Iowa’s high school students definitely or probably think that young people who smoke cigarettes have more friends. 4% definitely think that is true.

13% of Iowa’s middle school students definitely or probably think that young people who smoke cigarettes have more friends. 5% definitely think that is true.

More males than females think cigarette smokers have more friends, but the sex differences are small for the middle school students and somewhat larger for the high school students. 14% of middle school males think cigarette smokers have more friends compared to 12% of their female counterparts. 21% of high school males think cigarette smokers have more friends compared to 11% of their female counterparts.

**Figure 48. Definitely/Probably Think: Smoking Cigarettes Makes Young People Look Cool/Fit In (In Percent)**

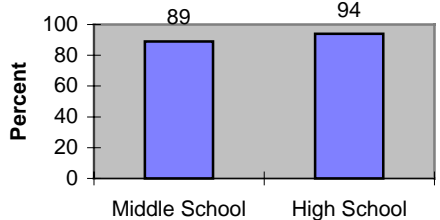


12% of Iowa’s high school students definitely or probably think that smoking cigarettes makes young people look cool or fit in. 3% definitely think that is true.

10% of Iowa’s middle school students definitely or probably think that smoking cigarettes makes young people look cool or fit in. 4% definitely think that is true.

More males than females think that smoking cigarettes makes young people look cool or fit in, but the sex differences are small for the middle school students and somewhat larger for the high school students. 11% of middle school males think smoking cigarettes makes young people look cool or fit in compared to 9% of their female counterparts. 16% of high school males think cigarette smoking makes young people look cool or fit in compared to 7% of their female counterparts.

**Figure 49. Definitely/Probably Think: Young People Risk Harming Themselves if Smoke From 1-5 Cigarettes Per Day (In Percent)**

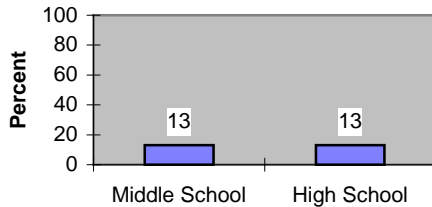


94% of Iowa’s high school students definitely or probably think that young people risk harming themselves if they smoke from 1-5 cigarettes per day. 69% definitely think that is true.

89% of Iowa’s middle school students definitely or probably think that young people risk harming themselves if they smoke from 1-5 cigarettes per day. 72% definitely think that is true.

More females than males think that young people risk harming themselves if they smoke from 1-5 cigarettes per day, and the sex differences are relatively small for both the middle and high school students. 92% of middle school females think that young people risk harming themselves if they smoke from 1-5 cigarettes per day compared to 87% of their male counterparts. 96% of high school females think that young people risk harming themselves if they smoke from 1-5 cigarettes per day compared to 92% of their male counterparts.

**Figure 50. Definitely/Probably Think: Safe to Smoke Only a Year or Two, as Long as Quit After That (In Percent)**

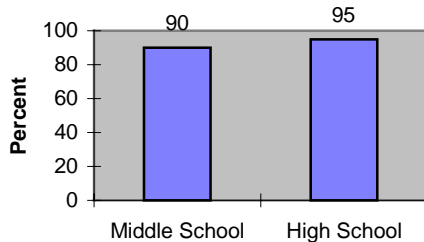


13% of Iowa’s high school students definitely or probably think that it is safe to smoke cigarettes for a year or two, as long as you quit after that. 3% definitely think that is true.

13% of Iowa’s middle school students definitely or probably think that it is safe to smoke cigarettes for a year or two, as long as you quit after that. 4% definitely think that is true.

More males than females think that it is safe to smoke cigarettes for a year or two, as long as you quit after that, but the sex differences are small for the middle school students and somewhat larger for the high school students. 14% of middle school males think it is safe to smoke cigarettes for a year or two, as long as you quit after that, compared to 11% of their female counterparts. 16% of high school males think it is safe to smoke cigarettes for a year or two, as long as you quit after that, compared to 9% of their female counterparts.

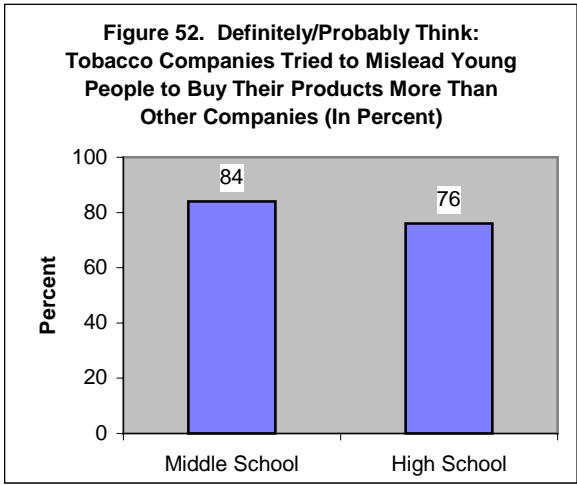
**Figure 51. Definitely/Probably Think: Smoke From Other People’s Cigarettes Harmful to You (In Percent)**



95% of Iowa’s high school students definitely or probably think the smoke from other people’s cigarettes is harmful to them. 73% definitely think that is true.

90% of Iowa’s middle school students definitely or probably think the smoke from other people’s cigarettes is harmful to them. 68% definitely think that is true.

More females than males think the smoke from other people’s cigarettes is harmful to them, and the sex differences are relatively small for both the middle and high school students. 92% of middle school females think the smoke from other people’s cigarettes is harmful to them compared to 88% of their male counterparts. 97% of high school females think the smoke from other people’s cigarettes is harmful to them compared to 93% of their male counterparts.



76% of Iowa’s high school students definitely or probably think that tobacco companies, more than other companies, have tried to mislead young people to buy their products. 39% definitely think that way.

84% of Iowa’s middle school students definitely or probably think that tobacco companies have tried to mislead young people to buy their products. 50% definitely think that way.

More female, than male, middle school students felt that tobacco companies misled young people (86% vs. 82%). However, slightly more male, than female, high school students felt that tobacco companies were misleading (77% vs. 75%).

**TOBACCO EXPOSURE: Middle and High School (Total and by Sex)**

Figure 53 below indicates the extent to which Iowa’s middle and high school students are exposed to tobacco use on TV and in movies, as well as tobacco product ads on the internet and in stores. Ninety percent of high school students and 82% of middle school students indicate that they most or some of the time watch TV or movies where actors are using tobacco. 28% of high school students and 26% of middle school students report that they most or some of the time watch TV where athletes are using tobacco. Twenty-two percent of high school students indicate that they most or some of the time see ads for tobacco products on the internet. A larger proportion of middle school students (27%) report seeing tobacco product ads on the internet. The vast majority of both middle (85%) and high (91%) school students report that they most or some of the time see tobacco product ads in convenience stores, supermarkets, or gas stations.

Both middle and high school males were somewhat more likely than their female counterparts to indicate they watched TV with athletes using tobacco products (29% vs. 24% and 30% vs. 24% respectively). Also, more high school males reported seeing tobacco product ads on the internet (25% vs. 18%). More middle and high school females, than males, saw tobacco ads in stores (88% vs. 83% and 93% vs. 89% respectively). The remaining sex differences were minimal.

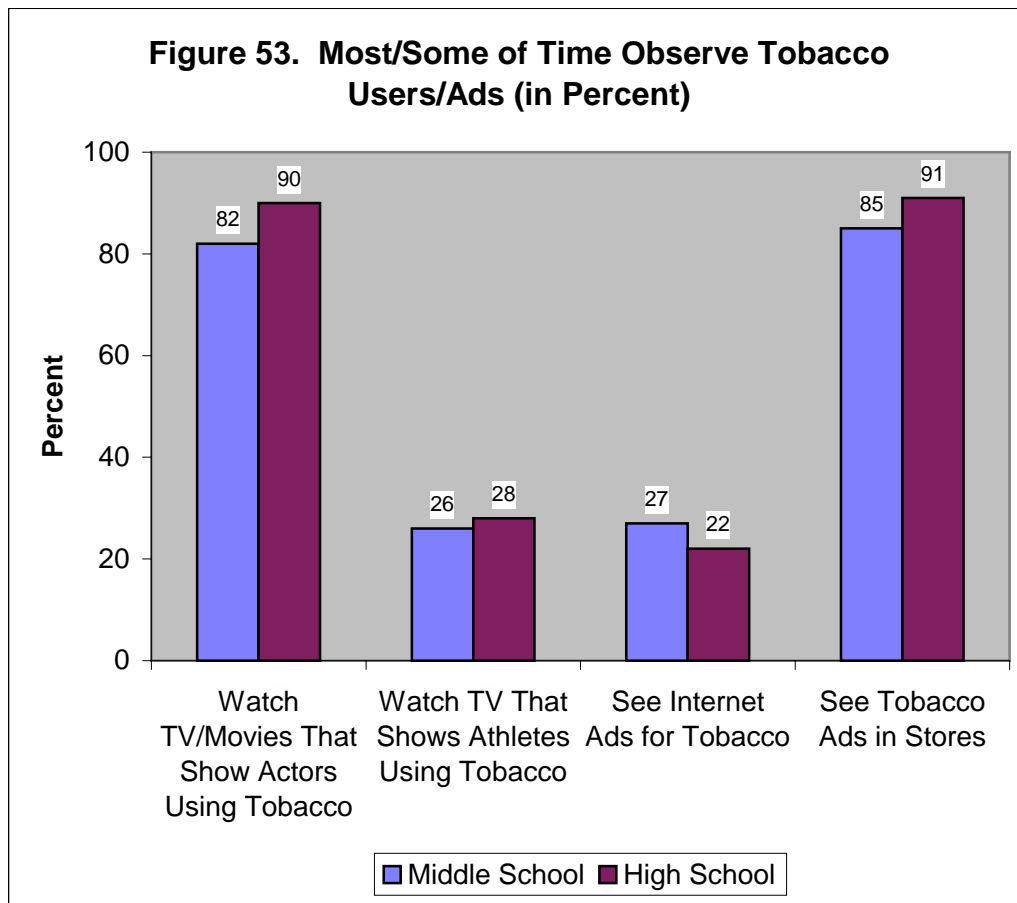
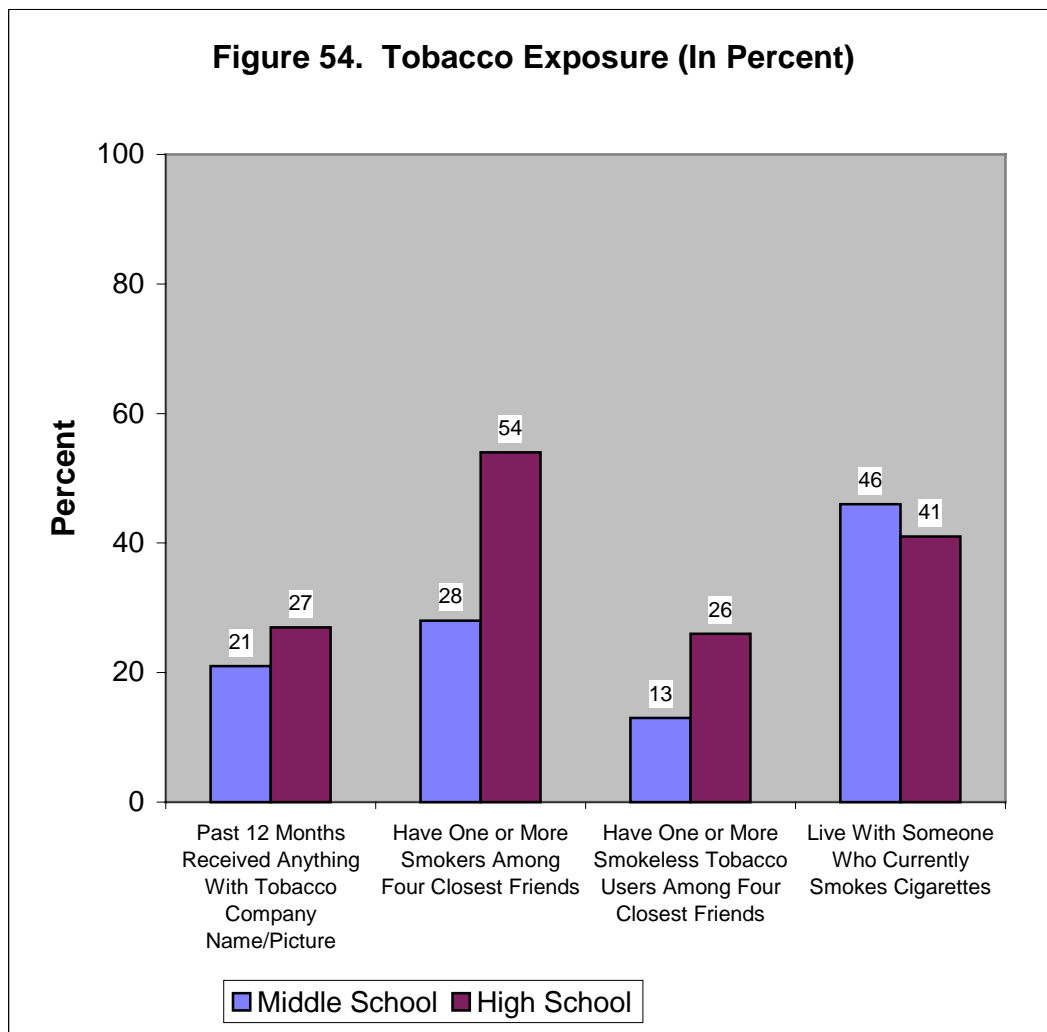


Figure 54 below provides more indications of the extent to which Iowa’s middle and high school students are exposed to tobacco company advertising and tobacco-using role models. 27% of high school students and 21% of middle school students indicate they have bought or received something in the past 12 months that has a tobacco company name or picture on it. 54% of high school students and 28% of middle school students report that one or more of their four closest friends smokes cigarettes. 26% of high school students and 13% of middle school students indicate that one or more of their four closest friends uses smokeless tobacco. Finally, nearly half, 46% of middle school students and 41% of high school students, report they presently live with someone who smokes cigarettes.

Both middle and high school males were more likely than their female counterparts to have received something with a tobacco company name or picture on it (24% vs. 19% and 33% vs. 20% respectively). Middle and high school males were also much more likely to have one or more of their closest friends being smokeless tobacco users (16% vs. 9% and 35% vs. 15% respectively). The remaining sex differences were minimal.



**TOBACCO PREVENTION ACTIVITY EXPOSURE: Middle and High School (Total and by Sex)**

Figure 55 below indicates the extent to which Iowa’s middle and high school students are exposed to various prevention activities. 66% of high school students and 71% of middle school students indicate that a parent/guardian has discussed the dangers of tobacco use with them. Only 13% of high school students indicate they have practiced ways to say “NO” to tobacco in any of their classes during the current school year. On the other hand, nearly half (45%) of middle school students indicate they have practiced saying “NO” to tobacco use. 11% of high school students report that they have participated in a community activity in the past 12 months that was designed to discourage people their age from using tobacco. A larger number (19%) of middle school students indicate they have participated in such community activities. Finally, a large majority of both middle (80%) and high school (87%) students report that they have seen or heard commercials on TV, the internet or the radio about the dangers of cigarette smoking.

High school males are somewhat more likely than their female counterparts to report a parent/guardian warned them about the dangers of tobacco use (68% vs. 64%). High school females are more likely to have taken part in a community prevention program (13% vs. 8%). Also middle school females are more likely than their male counterparts to have seen or heard commercials about the dangers of cigarette smoking (83% vs. 76%). The remaining sex differences are minimal.

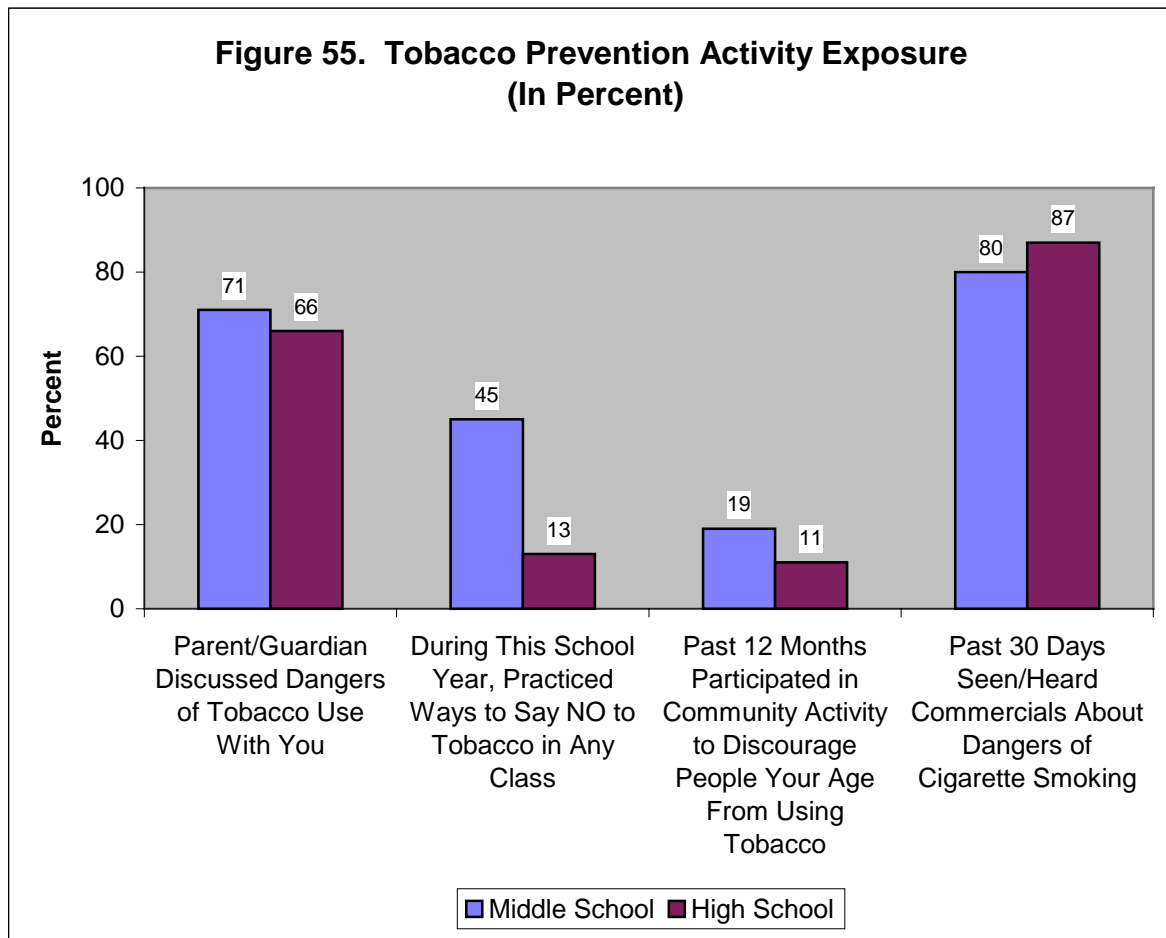
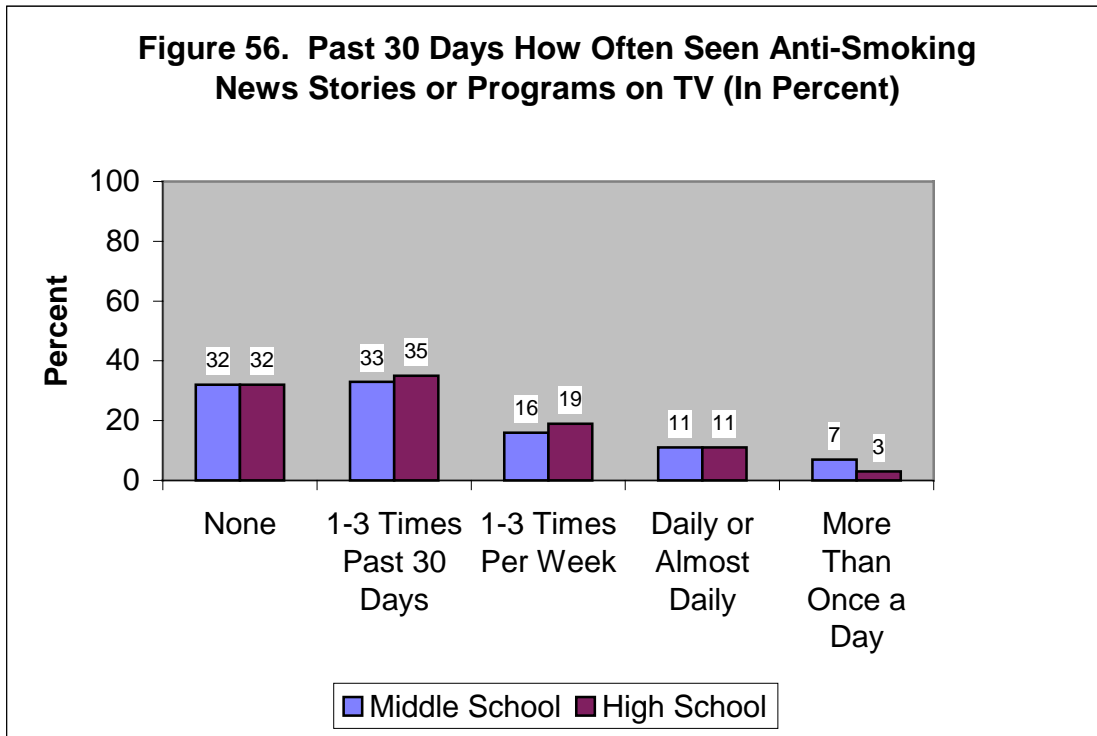


Figure 56 below indicates that 68% of both middle and high school students have seen an anti-smoking news story or TV program in the 30 days prior to interview. 18% of middle school students saw such a story or program almost daily or more often, but fewer high school students reported seeing such a story or program so frequently (14%). More middle school females, than males, reported viewing such material on TV 1-3 times (37% vs. 29%). The remaining sex differences were minimal.



## CONCLUSIONS/IMPLICATIONS

It is very common for Iowa's students in grades 6 through 12 to experiment with tobacco products, with 59% of these students (an estimated 167,203 students) reporting that they have tried a tobacco product in their lifetime. The tobacco product most often experimented with is cigarettes. Males are somewhat more likely to experiment with tobacco products than females. There is evidence, however, that suggests the newer generations of females (middle school females in grades 6 through 8) are rapidly catching up with their male counterparts. There is an obvious need to develop primary prevention programs that would reduce tobacco product experimentation. The primary prevention programs that are developed should target cigarette use, and resources should be equally allocated to both males and females.

Current (past 30 days) use of any tobacco product by Iowa's middle (6<sup>th</sup> through 8<sup>th</sup> grade) and high school (9<sup>th</sup> through 12<sup>th</sup> grade) students is somewhat higher than the national average, an obvious cause for some concern that reinforces the need for primary prevention. Current use of bidis and kreteks (fruit and candy flavored tobacco cigarettes) is low in Iowa, but they could become the "gateway" tobacco products for young Iowans. Both the supply of, and demand for, these imported tobacco products should be monitored very closely.

Current tobacco product use increases with each progression in grade level. Males report the largest increases from 6<sup>th</sup> to 7<sup>th</sup> grade, 8<sup>th</sup> to 9<sup>th</sup> grade and from 9<sup>th</sup> to 10<sup>th</sup> grade. Females report the largest increases from 7<sup>th</sup> to 8<sup>th</sup> and from 9<sup>th</sup> to 10<sup>th</sup>. Obviously, prevention programs are needed at every grade level, but 9<sup>th</sup> grade appears to be a critical point in time to expose both males and females to prevention programs.

Most students who experiment with tobacco products do not move from the experimental phases of tobacco use to regular and/or dependent use in grades 6 through 12, but there is evidence to suggest that over 15% do. All the tobacco product experimenters need to be exposed to secondary prevention programs that are designed to keep them from going beyond experimental use. It is estimated that about 25,000 middle and high school students in Iowa are currently dependent on a tobacco product, and it is estimated that nearly half of these users will be killed by their habit, losing an average of 20-25 years of nonsmoking life expectancy. Clearly any effort to reduce these outcomes would be beneficial.

There is every indication to believe that tobacco product use is not going away in the near future. Program planners, both prevention and treatment, need to be aware that an estimated 80,156 of Iowa's middle and high school students expect to be smoking cigarettes one year into the future and 49,741 think they will be smoking five years into the future. Females are just as likely, or even slightly more likely, to think they will be smoking in the future.

Iowa's middle and high school students, both males and females, are widely exposed to second hand smoke. Half or more of all students report second hand smoke exposure, being present on one or more of the last seven days in either a room or car with a smoker. The

extent of the danger posed by this exposure is uncertain, but it is likely that programs designed to reduce this exposure would reduce health-related costs in the future.

The Marlboro brand of cigarettes is clearly the most popular brand in Iowa, enjoying the allegiance of 72% of high school current smokers and 59% of middle school current smokers. Iowa's middle and high school smokers do **not** appear to favor menthol cigarettes. It is unknown how Marlboro has achieved such a dominant brand preference in Iowa, but its success obviously makes it a prime target for tobacco reduction programs.

About half of Iowa's middle and high school current cigarette smokers, both male and female, express a desire to quit smoking and over 70% think they probably or definitely could quit. This is despite the fact that over 40% have tried to quit two or more times. There does appear to be some discrepancy between what several of Iowa's students think they can do and what they have in fact failed to do in the past.

Most of Iowa's middle and high school smokers who are under age 18 (the legal purchasing age for cigarettes) usually obtain their cigarettes from acquaintances – others buy for them or borrow from others. Very few underage smokers usually obtain their cigarettes from vending machines. Programs that would discourage Iowa's older students from letting their younger peers use them as resources to obtain tobacco products would obviously be beneficial.

When Iowa's underage smokers last purchased a pack of cigarettes, they most often obtained them at a gas station, convenience store, or "other" place. Also, most underage smokers who tried to buy cigarettes in a store were not asked to show proof of age and most had never been refused a cigarette sale because of their age, especially females. While it is not possible to tell from this survey exactly how many stores allow illegal tobacco sales, it is apparent that underage smokers do have ready access to tobacco products in at least some of Iowa's stores. The prevention of underage tobacco sales should be a priority and perhaps new policies and stricter enforcement need to be adopted, especially for gas stations and convenience stores.

Most of Iowa's middle and high school students have appropriate tobacco-related attitudes that should discourage their use of tobacco products. Still, for one reason or another the majority of Iowa's students do experiment with tobacco products. Obviously, while it is important that students understand that: tobacco can be addictive; smoking does not produce friends; smoking is not cool; smoking can be harmful, and tobacco companies have attempted to mislead young people - there must be other attitudes that influence the decision to use tobacco products. These attitudes need to be identified and added to the educational programs that discourage tobacco use.

Other factors that might mitigate the impact of the attitudes described above include tobacco product ad exposure and tobacco-using role model exposure. There is plenty of evidence that Iowa's middle and high school students are widely exposed to tobacco product ads and tobacco-using role models and peers. Reducing this exposure in stores, movies and TV, as well as at home and among peers, would most likely be beneficial.

Finally, it is apparent that Iowa's middle and high school students are exposed to national media campaigns, TV news stories and programs that focus on the dangers of smoking. Still, again, most have at least experimented with tobacco product use. Iowa's students are less widely exposed to parental/guardian admonitions regarding tobacco product use and more parents should be encouraged to provide such information. Less than half of Iowa's students remember participating in a current school year role playing exercise that helps students say "NO" to tobacco use and even fewer remember participating in a community program designed to discourage young people from smoking. Assuming that it is never too late to benefit from tobacco prevention exposure, there is a need for more tobacco product prevention programs for every grade at the local level – family, school and community.

In short, the Iowa Youth Tobacco Survey (IYTS) clearly indicates a widespread need for primary and secondary tobacco prevention programs in Iowa, as well as treatment intervention programs, that can help Iowa's middle and high school students avoid tobacco product use and/or quit using them. It is also apparent that some needs are greater than others and that programs can be targeted in ways to maximize their benefit.

Still, the need for more information to better match resources to the areas of most need and to identify productive tobacco product reduction programs is also apparent. Should resources be available, the following data collection and analysis options should be considered:

The IYTS sample was too small to provide geographic or race/ethnicity tobacco-related prevalence rates. Another youth survey, the 1999 Iowa Youth Survey, while much more restrictive in terms of the number and kinds of tobacco-related questions included, did have a large enough sample to provide some basic tobacco-related prevalence rate estimates for 6<sup>th</sup>, 8<sup>th</sup> and 11<sup>th</sup> graders at a county level of analysis, as well as race/ethnicity-based estimates. Such estimates would provide some very useful tobacco control needs assessment-related data. Program planners could allocate resources to those geographic areas that are most in need, as well as identify those race/ethnic groups in Iowa that might present special needs.

The descriptive analyses to date provide few clues as to how the questions in the 2000 IYTS are related to each other. The next stage of IYTS data analysis should include correlation analyses. The identification of the kinds and degrees of correlations between the IYTS questions would help program planners make maximum use of the resources available. For example, the identification of which tobacco-related attitudes have the most impact on tobacco-related behaviors would help identify what kinds of education programs have the best potential to reduce tobacco product use.

Finally, if resources are to continue to be matched to needs, the tobacco-related attitudes and behaviors of Iowa's middle and high school students must be monitored over time. Also, if progress is to be made in identifying which of the tobacco-related prevention and intervention programs that might be developed have the most impact, it will be necessary to monitor the tobacco-related beliefs and behaviors of Iowa's students over time. The administration of another IYTS survey should be considered at some point in the future.

## FOOTNOTES

<sup>1</sup>The estimated number of students is based on a total of 119,865 middle school (grades 6 through 8) students and 164,802 high school (grades 9 through 12) students enrolled in both public and nonpublic Iowa schools for school year 1999-2000. The enrollment figures were obtained from the Iowa Department of Education (IDE) web site: [www.state.ia.us/educate](http://www.state.ia.us/educate).

<sup>2</sup>National estimates were obtained from Centers for Disease Control and Prevention (CDC), Morbidity and Mortality Weekly Report, "Tobacco Use Among Middle and High School Students - United States, 1999," Vol. 49, No. 3, January 28, 2000.

<sup>3</sup>These estimates obtained from the World Bank web site: [www1.worldbank.org/tobacco](http://www1.worldbank.org/tobacco).

## TECHNICAL TABLES

Table 1. Number of Surveys Completed in 2000 Iowa Youth Tobacco Survey\*

<b>SAMPLE</b>	<b>NUMBER STUDENTS SURVEYED</b>
Total (Grades 6-12)	3,279
Middle School (Grades 6-8)	1,834
Males	918
Females	912
High School (Grades 9-12)	1,445
Males	723
Females	710
Total Current (Past 30 Days) Cigarette Smokers (Grades 6-12)	676
Middle School Current Cigarette Smokers (Grades 6-8)	208
Males	100
Females	108
High School Current Cigarette Smokers (Grades 9-12)	468
Males	253
Females	211
Total Current (Past 30 Days) Cigarette Smokers Under Age 18 (Grades 6-12)	550
Middle School Current Cigarette Smokers Under Age 18 (Grades 6-8)	206
Males	99
Females	107
High School Current Cigarette Smokers Under Age 18 (Grades 9-12)	344
Males	183
Females	159
Total Current (Past 30 Days) Smokeless Tobacco User Under Age 18 (Grades 6-12)	183
Middle School Current Smokeless Tobacco User Under Age 18 (Grades 6-8)	71
Males	58
Females	13
High School Current Smokeless Tobacco User Under Age 18 (Grades 9-12)	112
Males	98
Females	11

\*This table is provided to give readers some indication of the number of students included in the analyses presented. The “Number Students Surveyed” column is not always the precise number of students that were used in the analyses (there were some students who failed to respond to some questions), but they are close enough to give the reader some indication of the approximate number of students that the prevalence rates in this report are based on.

Table 2. Selected Tobacco Product Use Prevalence Rates, Including 95% Confidence Intervals (CIs)\*: Middle and High School

<b>Tobacco Product</b>	<b>Middle</b>	<b>CI</b>	<b>High</b>	<b>CI</b>
Ever Used:				
Any Tobacco Product	46.2%	4.9	67.5%	3.0
Cigarettes	39.3%	5.1	63.4%	2.6
Smokeless Tobacco	13.8%	2.7	27.4%	3.2
Current (Past 30 Days) Use				
Any Tobacco Product	16.4%	3.0	39.0%	2.8
Cigarettes	11.8%	2.7	32.7%	2.5
Cigars	5.6%	1.0	14.5%	2.7
Smokeless Tobacco	4.2%	1.6	10.6%	2.2

Table 3. Selected Tobacco Product Use Prevalence Rates, Including 95% Confidence Intervals (CIs)\*: Middle School by Sex

<b>Tobacco Product</b>	<b>Male</b>	<b>CI</b>	<b>Female</b>	<b>CI</b>
Ever Used:				
Any Tobacco Product	48.3%	4.9	44.0%	5.9
Cigarettes	39.6%	5.3	39.1%	6.2
Smokeless Tobacco	19.4%	3.9	7.9%	2.4
Current (Past 30 Days) Use				
Any Tobacco Product	17.5%	3.6	15.1%	5.3
Cigarettes	11.3%	2.0	12.3%	5.1
Cigars	6.8%	1.9	4.3%	1.5
Smokeless Tobacco	6.6%	3.0	1.6%	1.0

Table 4. Selected Tobacco Product Use Prevalence Rates, Including 95% Confidence Intervals (CIs)\*: High School by Sex

<b>Tobacco Product</b>	<b>Male</b>	<b>CI</b>	<b>Female</b>	<b>CI</b>
Ever Used:				
Any Tobacco Product	72.2%	3.5	62.3%	3.5
Cigarettes	66.1%	3.2	60.7%	4.0
Smokeless Tobacco	41.5%	4.2	12.1%	3.7
Current (Past 30 Days) Use				
Any Tobacco Product	45.6%	3.7	31.9%	4.5
Cigarettes	34.2%	3.0	31.1%	4.5
Cigars	20.5%	3.4	7.7%	2.2
Smokeless Tobacco	18.1%	4.1	2.2%	1.0

\*The Confidence Intervals (CIs) mean that we can be 95% confident that the actual prevalence rates are within that many percentage points (either larger or smaller) of the observed prevalence rates in this sample. For example, we can be 95% confident that between 41.3% and 51.1% of Iowa's middle school (grades 6 through 8) students have tried some tobacco product in their lifetime. Similarly, we can be 95% confident that between 64.5% and 70.5% of Iowa's high school students (grades 9 through 12) have tried a tobacco product in their lifetime.