

Minnesota Student Survey 1992-2004 Trends



**A picture of the behaviors,
attitudes and perceptions of
Minnesota's 6th, 9th and 12th graders**

Minnesota Departments of Education, Health,
Human Services, Public Safety & Corrections

In Appreciation

We are indebted to the teachers, Minnesota Student Survey coordinators and superintendents across the state that agreed to participate in the student survey when it was administered in the spring of 2004. We especially thank the students who shared their attitudes, beliefs and behaviors with us through this survey. We urge you to share these findings with your communities—with students and families, with your school team of educators and staff, administrators and school board members, public health and social services staff, law enforcement and others who work with you to improve the school and community environments in which youth learn, grow and develop.

This information is available in other forms to people with disabilities by contacting us at 651.582.8452 (voice) or through the Minnesota Relay Service at 651.582.8201 (TTY).

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Executive Summary

Continued administration of the Minnesota Student Survey for the past 15 years provides educators, prevention program staff and agencies, administrators, community members and young people with an opportunity to identify trends in the prevalence of behaviors and attitudes of young people. Examination of these trends further offers us a chance to begin to determine where prevention programming and messages appear to be working and where our efforts have yet to result in positive change.

The Minnesota Student Survey includes questions about a wide variety of youth behaviors, including risk behaviors such as alcohol, tobacco and other drug (ATOD) use, violence and sexual activity, as well as positive behaviors and connection to family, school and community. This report highlights some key indicators across many areas of interest, including: academics and school connectedness, school safety and violence, mental health, ATOD, sexual behavior and families.

The 2004 administration of the student survey had a more racially and ethnically diverse student response than ever before, reflecting the continued changes in Minnesota's student population. Participation in the 2004 survey by districts was again quite high, as was involvement by sixth and ninth grade students. We continue to strive for

better participation by our twelfth graders.

There is cause for commendation because many of the unhealthy or risky behaviors students engage in have continued to decrease in prevalence since the last administration of the survey three years ago. In addition, many of the positive or protective behaviors students engage in have continued to increase in prevalence. In the area of academics and school connectedness, we find continued good news, with slowly improving trends in student plans to go to college and in perceptions of teacher respect for and interest in students. Students reported a high sense of safety at school and a decreased number of physical confrontations. Students reported continued decreases in carrying weapons to school, destroying property, stealing, and physically abusing others.

Also continuing a downward trend were reports of gambling, such as betting on sports teams and buying lottery tickets or scratch-offs. In the area of ATOD, we witnessed a continued decline in alcohol use (all measures), a continued strong downward trend for smoking cigarettes, as well as decreased reports of the use of marijuana, someone else's prescription drugs, inhalants and other drugs. Fewer students reported being offered, sold or given illegal drugs on school property than in previous surveys. Comparison of these data with national trends reveals that Minnesota twelfth graders reported general alcohol and marijuana use less than seniors did nationally; our twelfth graders reported smoking and binge drinking at about the same levels as seniors nationally.

When we examine other health behaviors, we find that reported seatbelt use also continued to increase. Decreasing percentages of students reported that they have ever had sex, and for those students who are having sex, there were consistent reports of condom use and discussions about disease protection. Students reported a high level of caring by their parents, consistent parental respect for their privacy, as well as slight increases in their ability to talk with their mother or father about problems.

Despite these encouraging findings, there are still areas where student reports of risky or unhealthy behaviors are not decreasing or where they are still too high. In the area of school connectedness, there has been a slight increase in students reporting that they have been skipping school because they feel unsafe. There has been little change in the percentage of students reporting that they feel sad all or most of the time, feel discouraged or hopeless, or have tried to kill themselves. These reports are consistently higher for girls than boys over time.

Almost one-third of twelfth graders report binge drinking at least once in the past two weeks; almost 30% of seniors report driving a motor vehicle after using alcohol or drugs; and slightly over one-quarter of twelfth graders report smoking cigarettes in the past month. Reported levels of physical activity and consumption of fruits and vegetables have remained stagnant over time and are lower

than nationally recommended guidelines. Finally, there has been little improvement in the percentage of students reporting that alcohol or drug use by family members has repeatedly caused problems.

Recommendations

The results of trend analysis of the Minnesota Student Survey support the following recommendations:

- **The positive health behavior changes that have been made and sustained over time are cause for commendation.**

Youth, families, school and community agency staff can take credit for significant improvements in everyday physical health and positive decisions demonstrated through this survey. The public needs to understand many voices speaking the same prevention messages in many venues over time made a significant difference for youth today and in the future.

- **Minnesota must continue to support intensive and comprehensive evidence-based prevention efforts that involve parents, communities, schools, and public agencies working together to promote healthier behaviors by youth.**

Our state has made, over the years, major investments in prevention programming that are now showing results. During times of budget restraint, our challenge is to sustain these efforts. It is essential that current partnerships and coalitions be sustained and new ones created to ensure that existing effective practices and programs in school and community settings be maintained. These groups must continue to promote the understanding and use of a common language for prevention. Every effort to

partner across sectors—locally, regionally and statewide—is more critical than ever before if the positive results shown in this survey are to continue.

- **Prevention efforts must continue to focus both on preventing younger students from initiating unhealthy behaviors and in helping older students change already adopted risky behaviors.**

Preventing problems early is the mantra for many working in health promotion. But the Minnesota Student Survey reveals still unacceptably high levels of high-risk behaviors by some youth, as well as unchanging levels of behaviors of concern, especially in the area of mental health.

- **The wealth of information provided by young people through the Minnesota Student Survey provides an opportunity for more research and analysis to be conducted by state agencies, school districts, counties and others.**

The opportunity that lies before us is not only to use current resources for further investigation but also to find additional resources for more extensive analysis of data. Issues that beg consideration include analysis of the associations between various protective and risk factors (including how these factors interact with academics), examination of gender differences in the experiences and attitudes of youth, and understanding transitions made between elementary, middle and high schools.

The challenge before us is to use the information we have received from youth to explore, explain and expand what works to support youth in Minnesota families, schools and communities.

Introduction

About the Minnesota Student Survey

The Minnesota Student Survey provides students, parents and their communities a vehicle for ongoing communication about issues vital to the health, safety and academic success of youth. Questions address students' activities, opinions and behaviors. The broad array of issues includes substance abuse (tobacco, alcohol and illegal drugs), school climate, weapons and other safety issues, nutrition, academics, connections with school, family and community and many other topics. At the senior high level, there are also questions about sexual activity. Taken together, youth responses to these questions can be used by educators, parents, communities, and youth themselves to identify the strengths of young people and to respond to their needs and concerns.

The survey is offered every three years to students in the regular public elementary and secondary schools, alternative learning centers, charter schools, tribal schools and to youth in Juvenile correctional facilities and residential treatment facilities. The trends provided in this report focus on students in K-12 public schools, charter schools and tribal schools. Findings for the alternative settings are reported separately.

The survey data can be used by state agencies to monitor trends in

health and risk behaviors, design and adjust programming to meet the current and anticipated needs of youth, apply for funding for statewide initiatives and for assisting schools and communities in efficient planning and implementation of education programs. School district leaders and educators, community and local public health and social services agencies use the results for prevention programming to reduce risky health behaviors, promote community-wide norms that support positive behavior choices and make decisions on the need for treatment and intervention, especially related to alcohol, tobacco and illegal drug use.

For access to statewide, county and other reports about the Minnesota Student Survey, please see: www.mnschoolhealth.com and click on the "Data" tab.

Survey Administration

Compared to previous years, the 2004 administration of the Minnesota Student Survey brought new partners, challenges and opportunities. The Departments of Health, Public Safety and Corrections joined the Minnesota Departments of Education and Human Services in a partnership to manage, analyze, report and fund the initiative. While the survey items had been adjusted and refined between each survey administration in the past, no changes were made from 2001 to 2004.

Connecting with parents and respecting their wishes regarding their child's participation has long been the practice in administering the survey. Parents were informed in advance by each local school about the survey. Sample parent letters were provided to school district

coordinators in English and were translated into Spanish, Somali, Hmong, Cambodian, Laotian and Russian. Parents could choose not to have their children participate. In 2004, a small number of school districts required active parent consent (refer to technical note section for more details).

Students themselves could decline to take the survey, or if they took the survey, they could skip any question or stop at any point. Surveys were anonymous; no names or identifying code numbers were used on the survey booklets. Answers cannot be traced to an individual.

School District and Student Participation

The survey is optional on the part of school districts. Most school districts participate because each participating school district receives a detailed report of results for their district and a statewide report for comparison.

The great majority of school districts in Minnesota have participated in the Minnesota Student Survey. The school district participation rate was 99% in 1992, 92% in 1995, 92% in 1998, 91% in 2001 and 88% in 2004. Most districts had all three grades participate.

Student participation rates within school districts vary widely. Statewide, in 2004, 76.2% of 6th grade students, 75.1% of 9th and 55.3% of 12th graders participated. *Note that these percentages differ from those*

provided in the cover materials to the statewide, county and district data tables, as those rates use a different denominator (all students in 6th, 9th and 12th grade statewide versus students in relevant schools).

Statewide, participation increased from 89,000 in 1989 to more than 133,000 in the last three administrations. In 2004 close to 144,000 students took the survey across all education settings including 134,000 in regular public schools. Approximately 3% of surveys are omitted from the final dataset (and, therefore from the statewide tables that report frequencies of student responses and from trend analyses), because gender was missing or response patterns were inconsistent or highly improbable.

Trends Report

This report focuses on several behaviors that may interfere with the health and well being of young people and on the school environment that may foster or hinder their social and academic growth. Since many of the same questions have been asked at each survey administration, comparisons can be made across time to determine whether health risk behaviors have increased or decreased in the middle and high school populations.

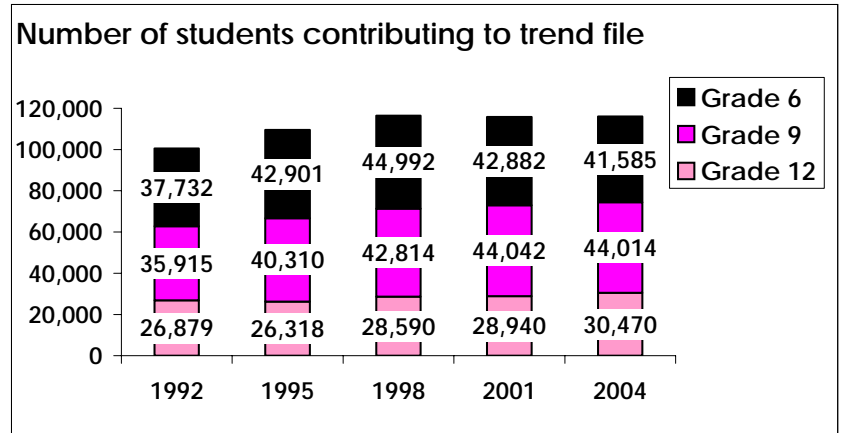
To compare state results across years, the student findings for this trends report include only the school districts that participated in five administrations of the survey – from 1992 to 2004. Selecting only participating school districts ensures that changes in reported student behaviors or attitudes are not due to variance in the set of school districts participating in the student survey. The school district sample for the 1992 – 2004 trend analysis represents 86% of all of the students surveyed during the five administrations of the survey. The table to the right shows the

numbers of surveys included in the trend analysis from each survey administration.

The technical aspects of this process and the validity of student responses are discussed at the end of this report.

Note that this report reflects the needs and perspectives of students in regular public schools, charter schools and tribal schools. Students who are dual-enrolled in the regular high school and in an alternative learning setting, and who took the survey as a part of the traditional high school class, are included in these findings.

However, students who are enrolled in a wide range of alternative learning programs/centers designed to meet their unique learning, working and social needs are not included in the trends report. Some youth are in the juvenile justice system or in treatment for emotional or behavioral problems. The 2004 Minnesota Student Survey was administered to youth in these alternative learning settings, juvenile corrections and residential treatment centers. There are separate statewide data tables for each of these three special populations and future reports will present analysis of their findings.



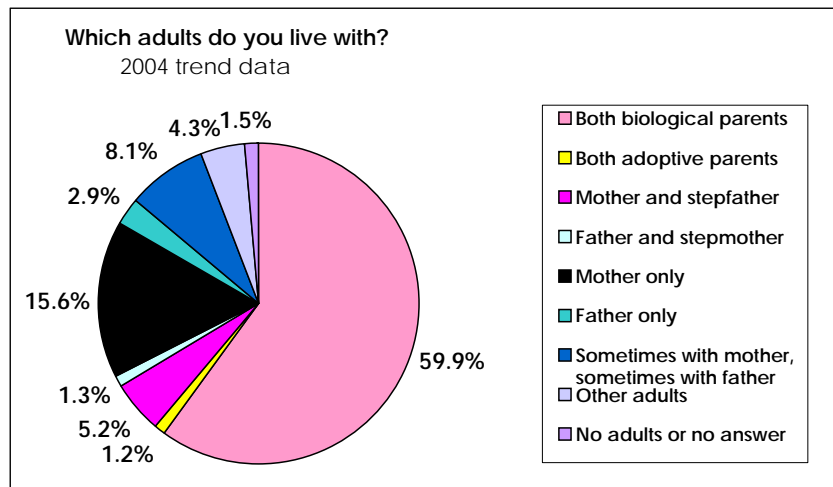
Demographics

As explained in the previous section, the analysis in this report is based on the great majority of public school students but excludes students from districts that have not consistently participated in the student survey. This section describes the students upon whom this trend report is based.

Family Structure

In 2004, more than two-thirds of participating students lived in two-parent households, including 61.2% living with both biological parents or both adoptive parents and 6.4% with a parent and a stepparent. Another 8.1% divided their time, sometimes living with the mother and sometimes with the father. More than one of every six students (18.5%) lived with one parent only.

Family living situations have changed little since 1992. The most noticeable changes are that the percentage of students living with both biological or both adoptive parents fell gradually from 63.9% to 61.2%, and the percentage of students living sometimes with their mother and sometimes their father increased from 4.9% to 8.1%.



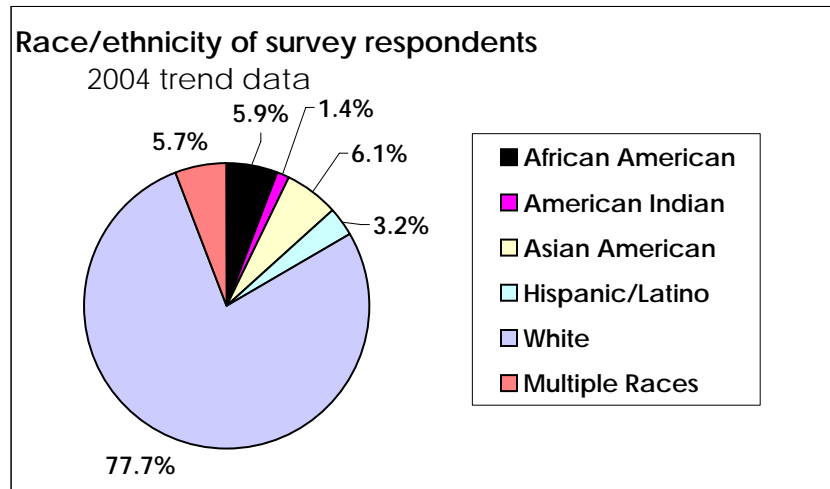
Race/Ethnicity

Since 1995, the Minnesota Student Survey has asked a question on racial/ethnic background that allows students to mark more than one racial/ethnic group. In the data used for the trend analysis, more than three-fourths of students taking the survey in 2004 (77.7%) marked White only, 6.1% marked Asian American only, 5.9% marked Black or African American only, 3.2% marked Hispanic only, and 1.4% marked American Indian only. Altogether, 5.7% of students marked two or more racial/ethnic groups. Among these students, the largest group was those who marked both American Indian and White.

The percentage of African American, Asian and Hispanic students participating in the Student Survey has increased steadily since 1995, reflecting the growing numbers of students of color in Minnesota's student population. The percentage of American Indian students has remained the same. The percentage of White only students has declined from 85.0% in 1995 to 77.7% in 2004.

Gender

In each year, the group of students responding to the survey has been evenly divided between males and females.

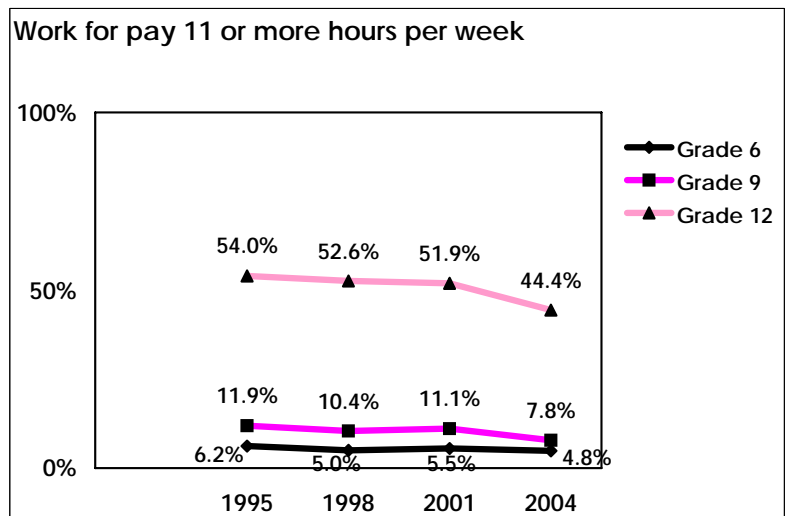
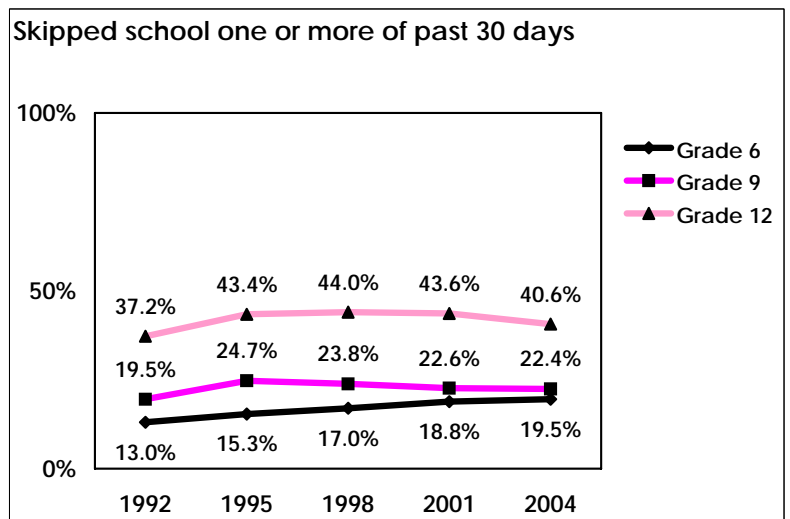
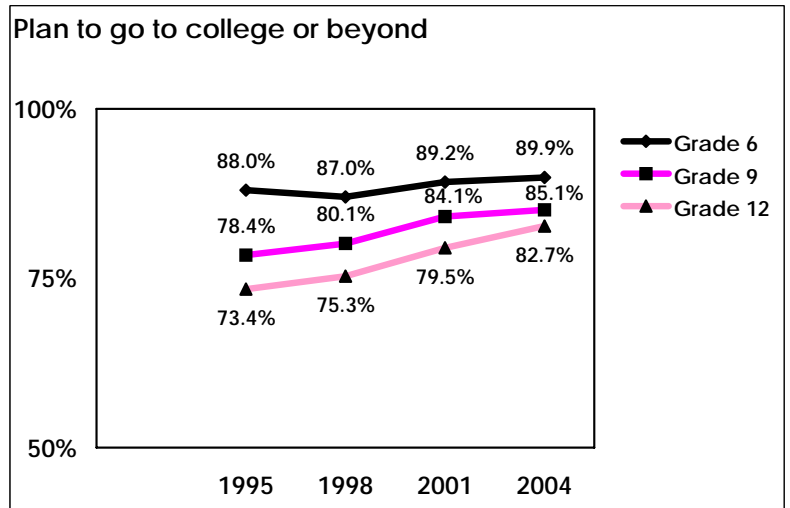


Academics & School Connectedness

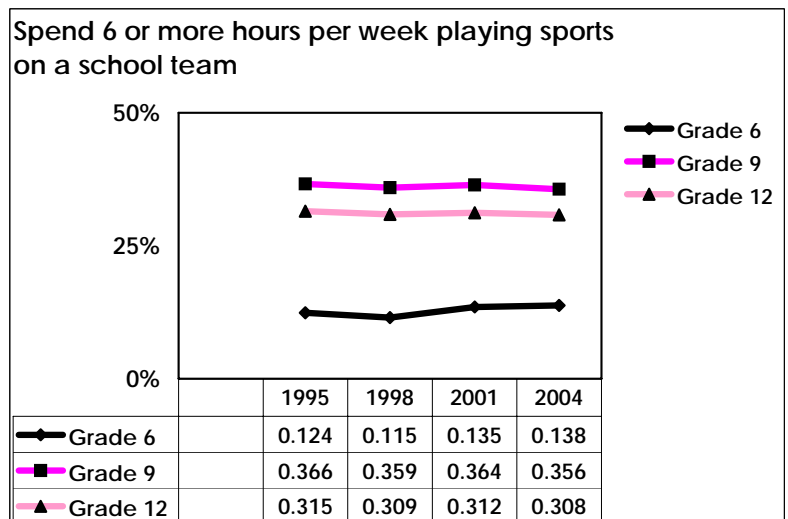
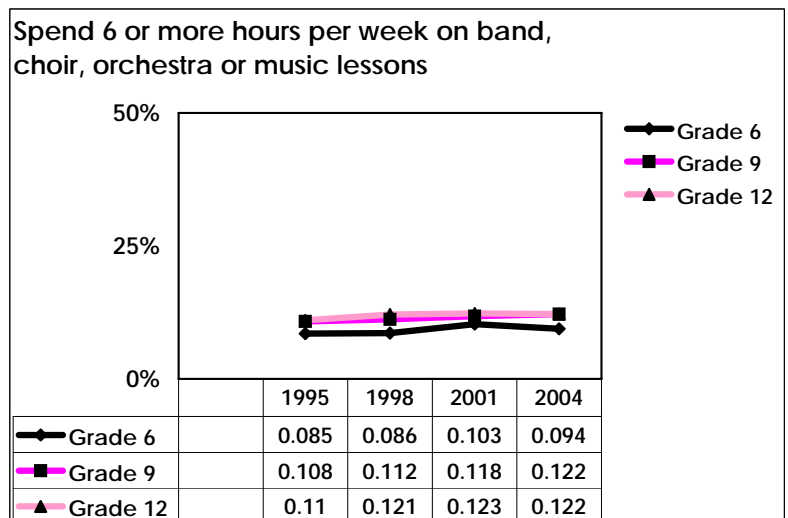
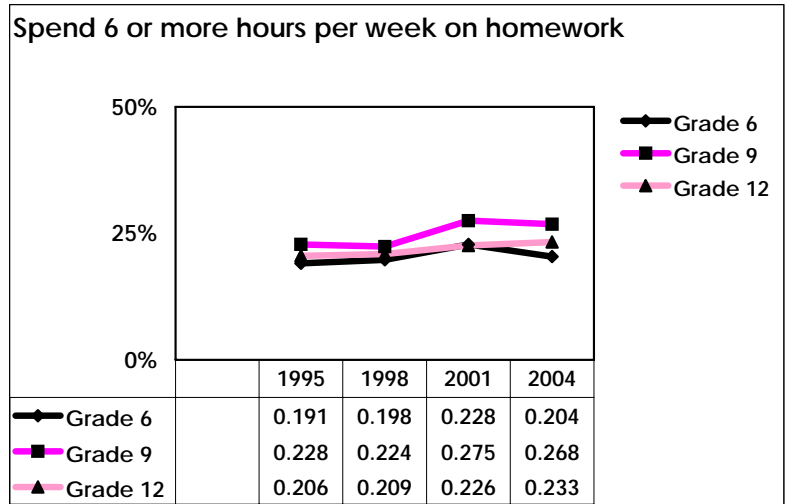
Students' plans to go to college have been consistently high over time. Sixth grade students are the most optimistic with nearly 90% reporting plans for higher education. In these two upper grades, however, there has been a steady upward trend with over four-fifths of seniors now reporting their intentions to continue their education after high school.

One-fifth of 6th graders reported skipping school one or more days in the past 30 days, a measure that has gradually increased over time. Over 20% of ninth graders reported skipping in the past month, a rate that has held relatively steady over time. Slightly more than 40% of 12th graders reported skipping school in the past 30 days, but the rate, having held steady since 1995, declined from 2001 to 2004.

While working has many positive rewards and is a necessity for many students, research has shown that working more than 10 hours per week may negatively impact school success. The percentage of 9th and 12th grade students working 11 or more hours per week fell sharply from 2001 to 2004, although 44.4% of 12th graders still reported working for pay outside the home at least 11 hours per week.

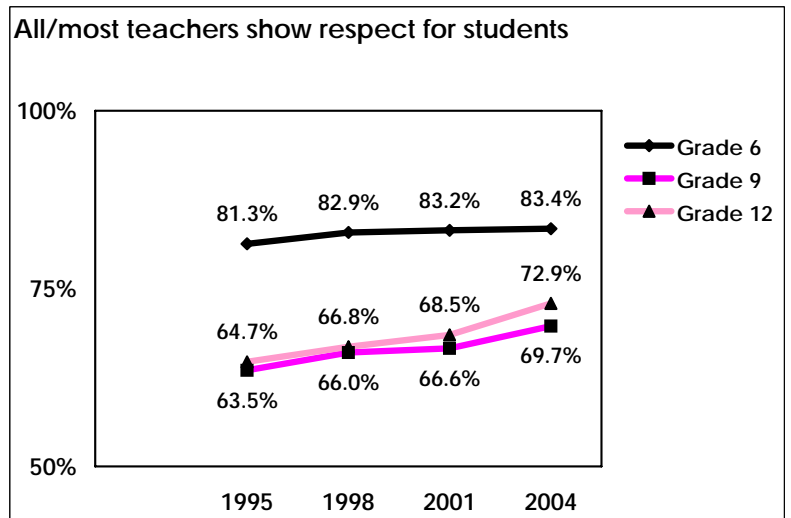
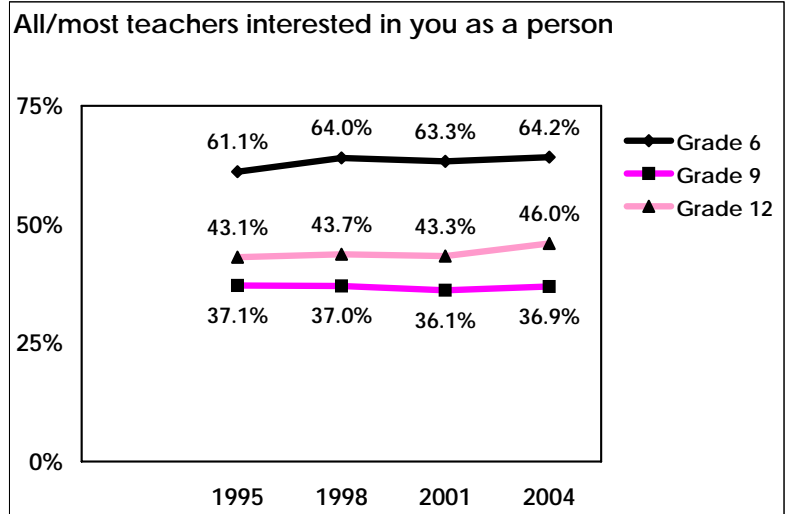


Involvement in school-related activities has a direct connection to academic achievement. Several measures have held steady over the past decade. Across grade levels, from one-quarter to one-fifth of students reported spending six or more hours on homework per week, and around 10% of students reported involvement in music six or more hours per week. Sports take up more time for the upper two grades with around one-third of students involved six or more hours per week and a reported rate of one-eighth of 6th graders.



Feeling connected to educators is an important protective factor when it comes to school achievement. Student perceptions of whether teachers are interested in them as individuals have been relatively level over the years: nearly two-thirds of 6th graders, one-third of 9th graders and not quite one-half for 12th grade students feel that all or most teachers are interested in them as people.

While personal interest is felt by less than half of students, a great majority at all grade levels report teachers show respect for them. For 6th grade students, this has been constant over the years and above 80%. For 9th grade students, there has been a very gradual increase to 69.7% in 2004. Twelfth graders, too, have a gradual increase in their reported rate over time to 72.9%.

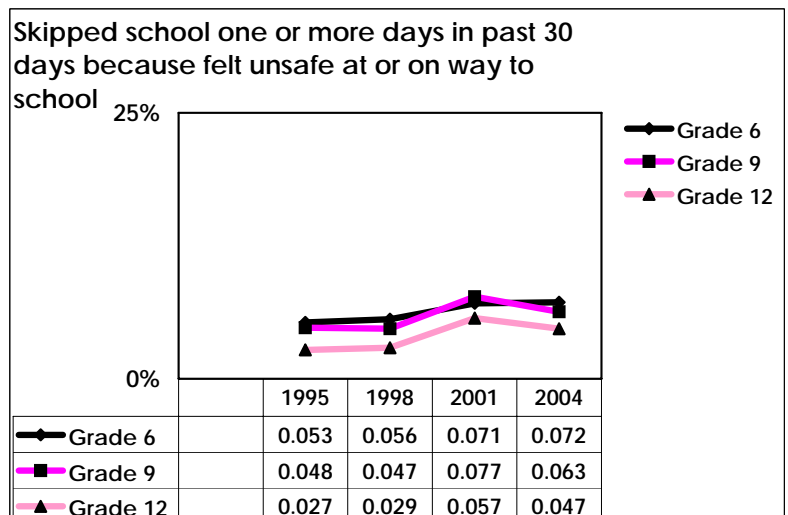
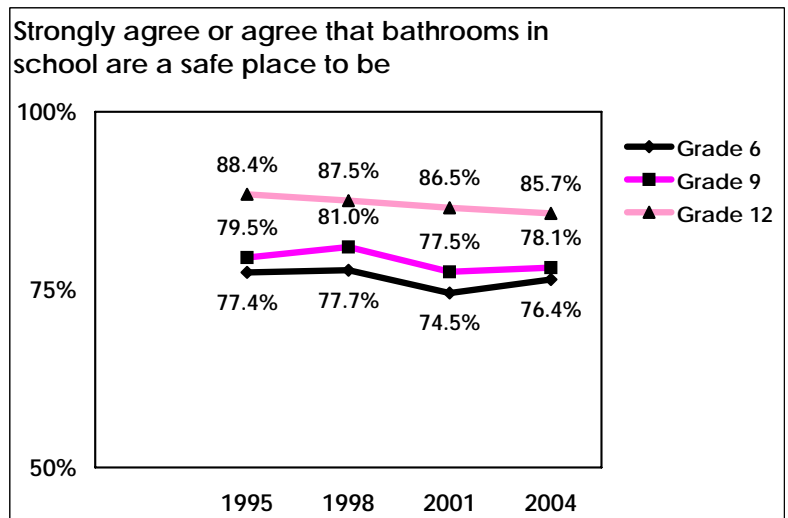
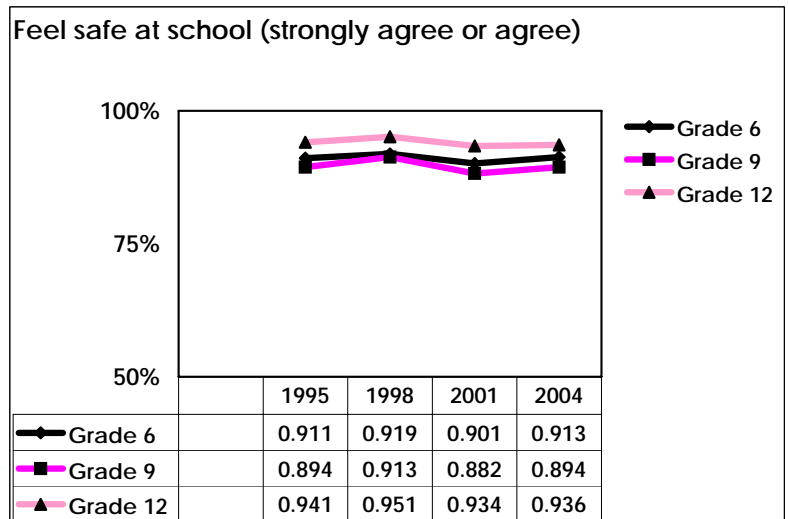


Perceptions of School Safety

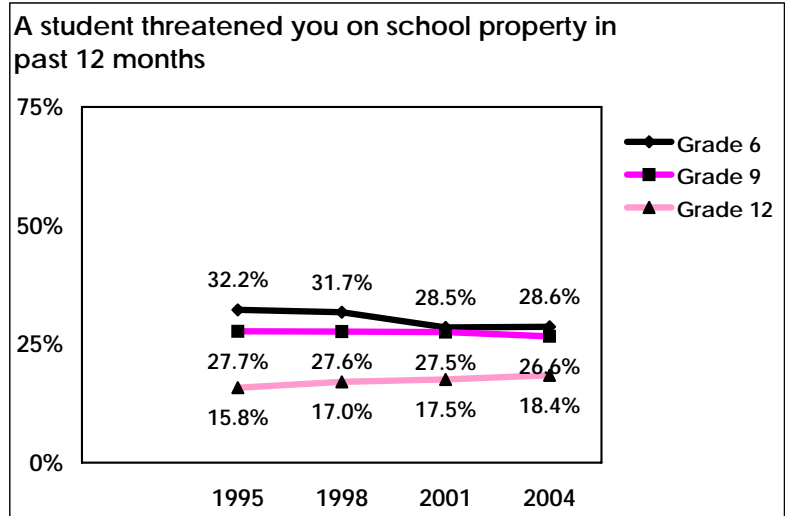
Students in 6th, 9th and 12th grades have consistently reported high perceptions of safety at school. This trend has remained constant over time. On average, close to 90% of students in each grade reported feeling safe at school.

Fewer students agreed that bathrooms are a safe place to be at school. Although the trends are somewhat consistent over time, only three-quarters of 6th graders feel that bathrooms are safe compared to over 90% feeling safe at school generally. Slightly fewer 12th graders in 2004 agreed with the statement that bathrooms in their schools are a safe place to be compared to perceptions in 1995.

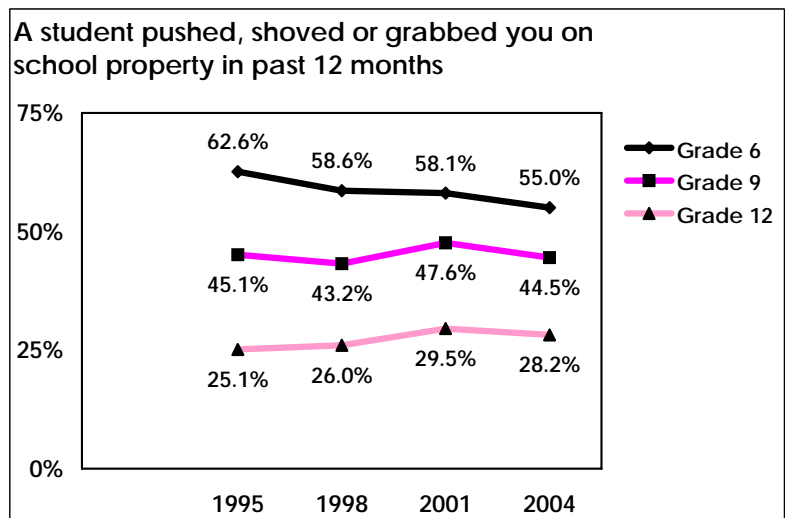
Student reports of skipping school one or more days in the past 30 days because of feeling unsafe at school or on the way to school have increased slowly over time. Slightly more 6th graders and 9th graders reported skipping school because of feeling unsafe than 12th graders.



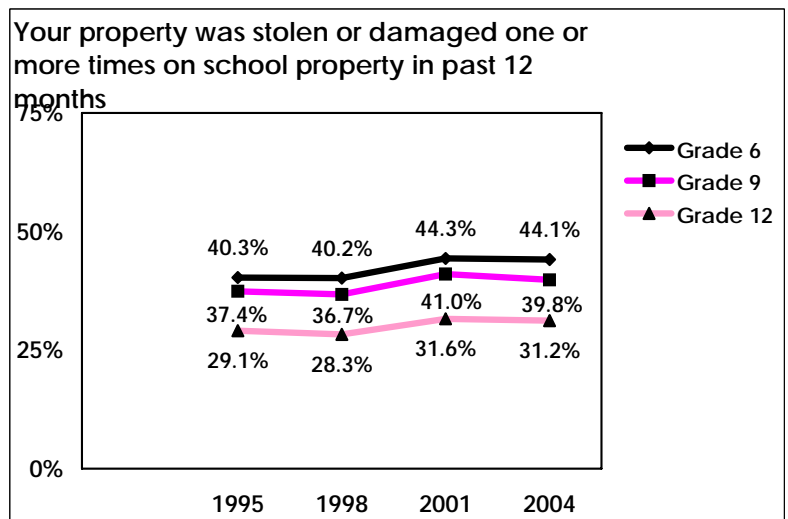
Reports that students had been threatened on school property have also remained fairly consistent over time. There has been a slight drop in reports by 6th graders and a slight increase in reports by 12th graders. More than one-fourth of 6th and 9th graders and nearly one-fifth of 12th graders reported that a student threatened them on school property in the past year.



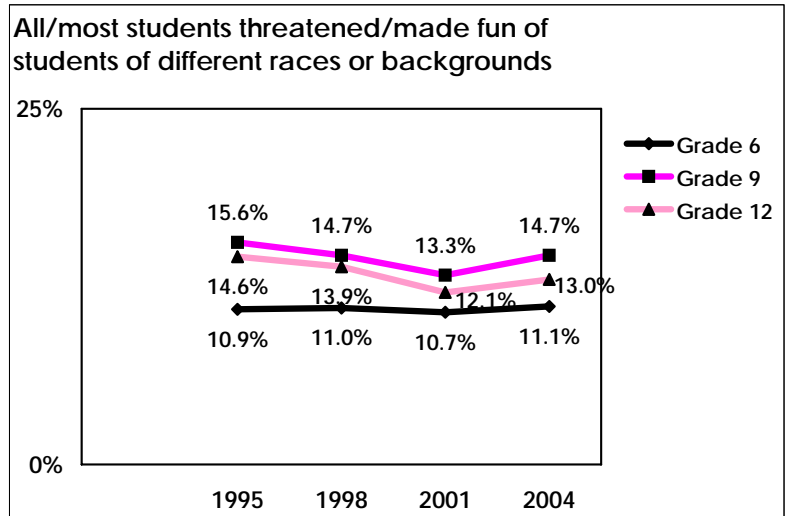
Since 1995, consistent percentages of students in 9th and 12th grade reported that a student pushed, shoved or grabbed them on school property in the past year. There has been a downward trend for 6th grader reports of these experiences, from 62.6 percent in 1995 to 55.0 percent in 2004. In 2004, over one-half of 6th graders, almost one-half of 9th graders and a little over one-quarter of 12th graders reported that a student pushed, shoved or grabbed them on school property in the past year.



The percentage of students reporting that their property was stolen or damaged at least once on school property during the previous year has not improved over time. Approximately 40% of 6th and 9th graders reported having this experience.

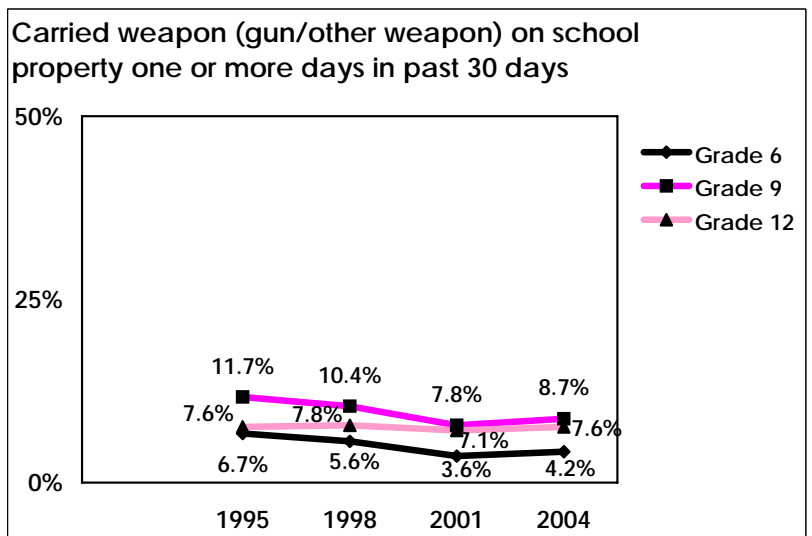


The perception that students in their school have threatened or made fun of students of different races or backgrounds has remained fairly consistent over time. About one in seven 9th graders reported that all or most students in their school have threatened or made fun of students of different races or backgrounds.

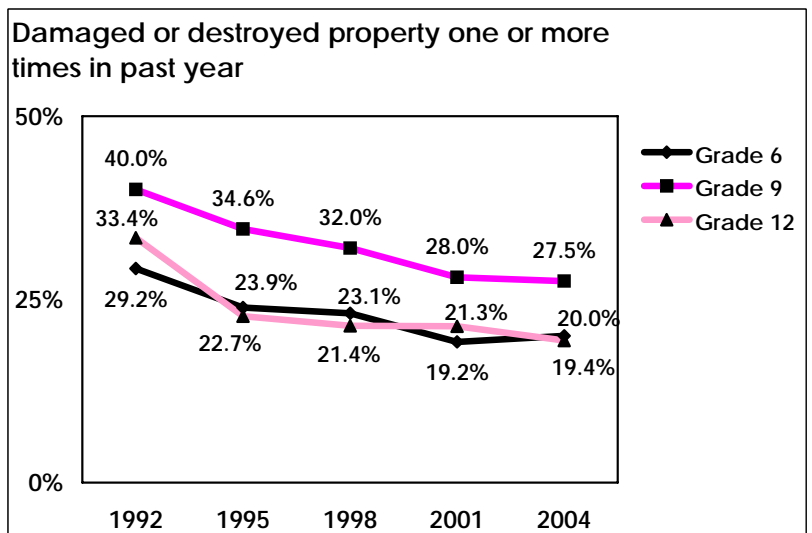


Violent and Anti-Social Behavior

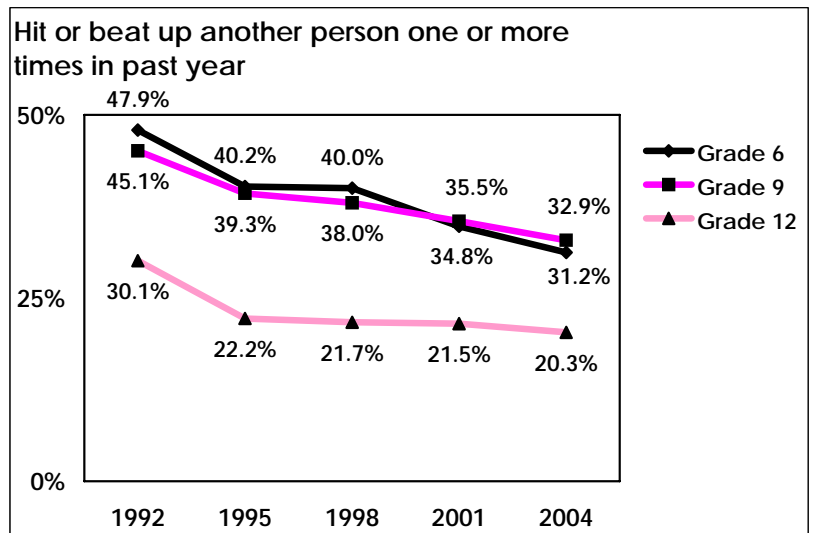
Slightly smaller percentages of 6th graders and 9th graders reported that they carried a weapon (gun or other weapon) on school property one or more times in the past 30 days in the 2001 and 2004 than in the mid-1990s. The trend has been consistent for 12th graders over time. Overall, a higher percentage of 9th graders and 12th graders than 6th graders reported that they carried a weapon on school property in the past month.



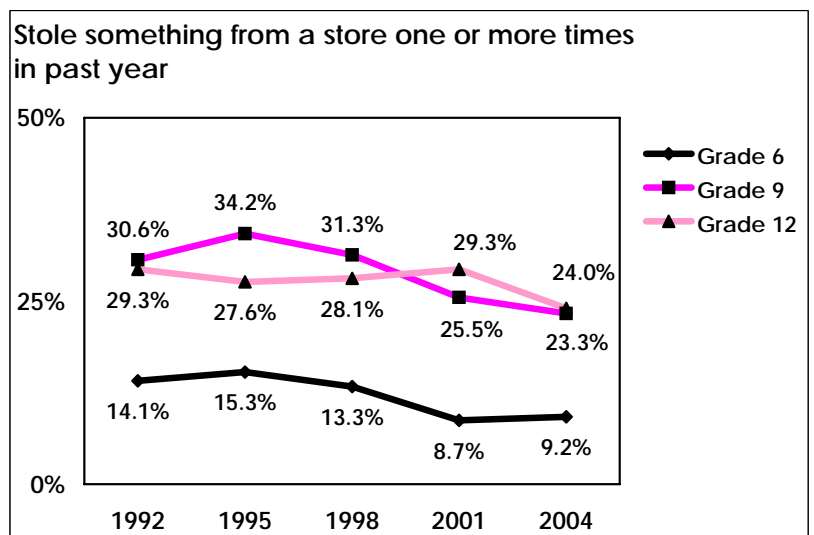
The percentage of students reporting that they damaged or destroyed property one or more times in the past year has steadily decreased over time. However, in 2004, still more than one-quarter of 9th graders and about one-fifth of 6th and 12th graders reported engaging in this behavior.



Similarly, the percentage of students reporting that they hit or beat up another person in the past year has decreased consistently over time, from just under one-half for 6th and 9th graders in 1992 to one-third of 6th and 9th graders in 2004. Approximately one-fifth of 12th graders reported this behavior in 2004.



Over time, a smaller percentage of students in 6th, 9th and 12th grades reported that they had stolen something from a store in the past year. In 2004, almost one-quarter of 9th and 12th graders reported stealing something from a store in the previous year. Fewer than 10% of 6th graders reported engaging in this behavior in 2004.

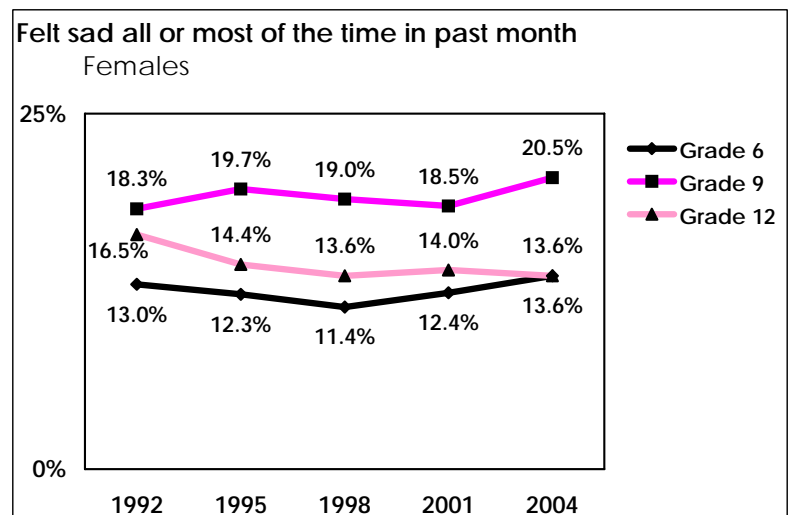
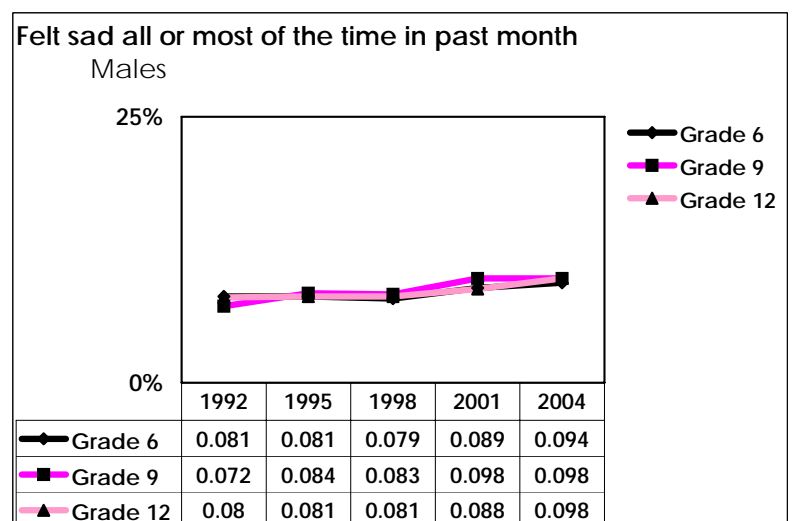
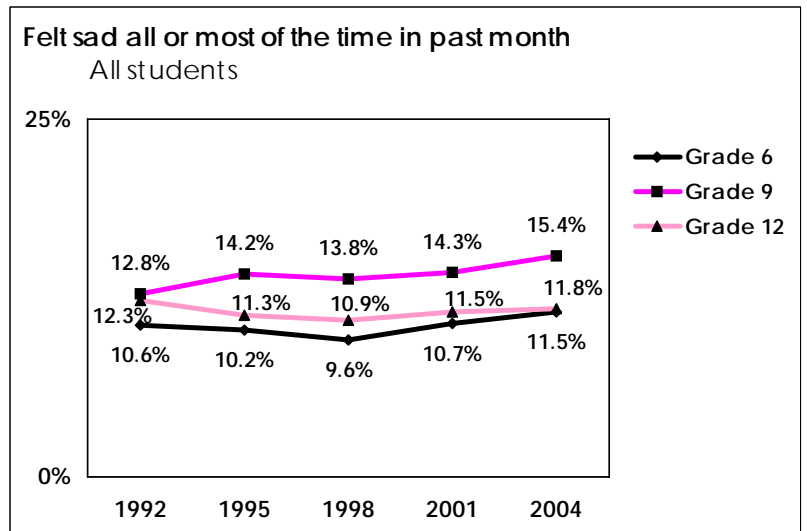


Mental Health

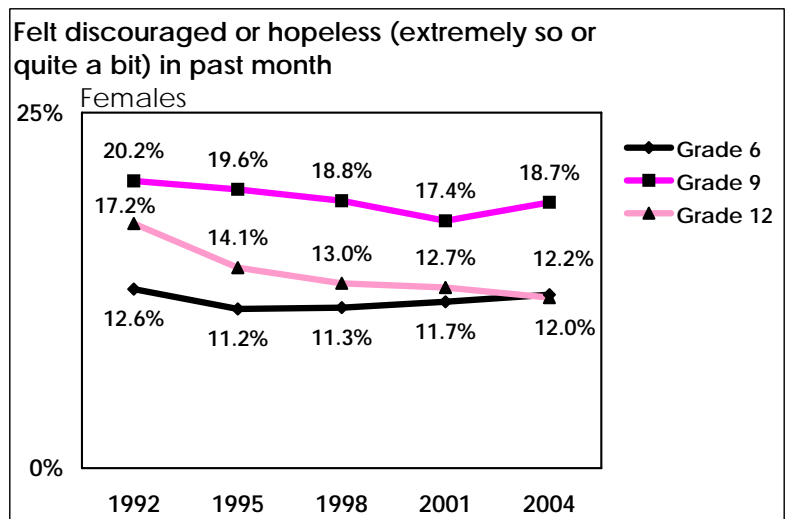
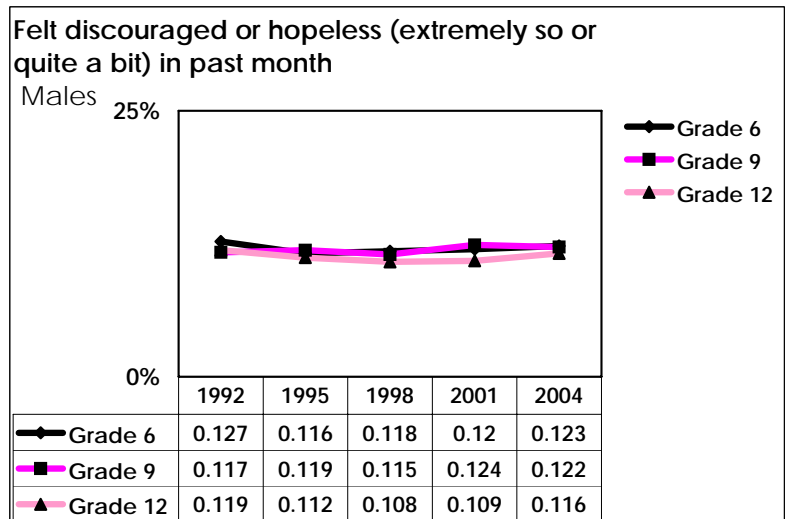
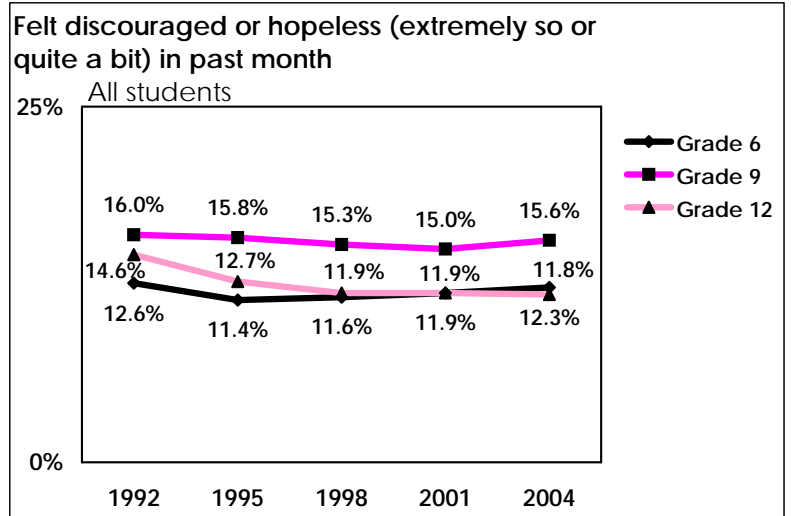
Academic success requires students to be engaged in learning and have high expectations of making progress. A variety of emotional and social concerns can interrupt, distract or otherwise disturb learners, making the school experience frustrating and hindering academic achievement.

Feeling sad all or most of the time in the past month was reported by just over ten percent of 6th and 12th grade students in 2004; 9th graders reported a rate of 15.4%. When genders are combined, the rates are steady within each age group, varying less than 2.6 percentage points. For males alone, the rates for each age group are very similar, just under ten percent and having a very slight and steady increase over time.

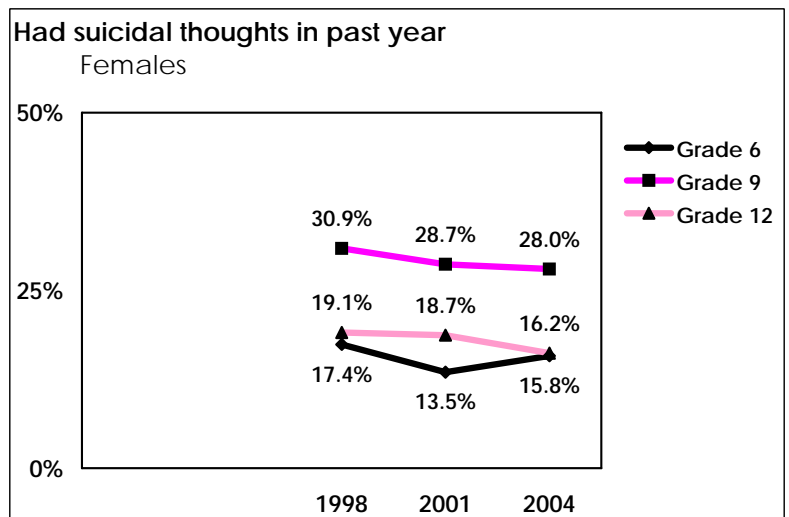
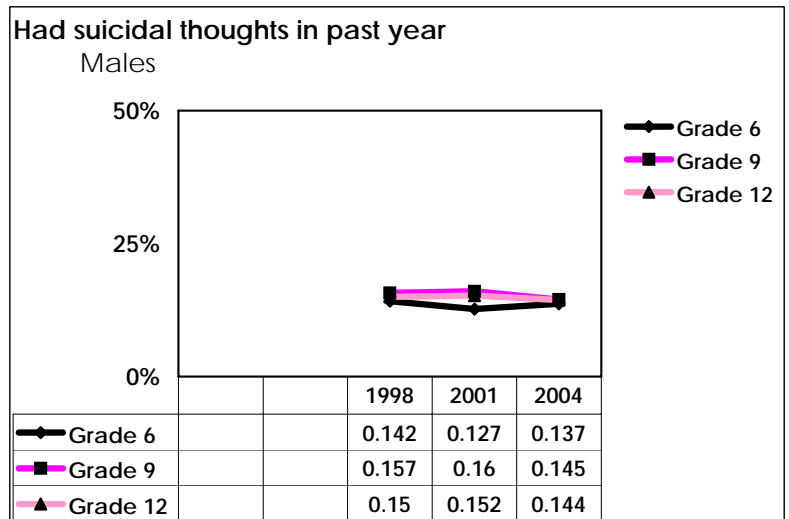
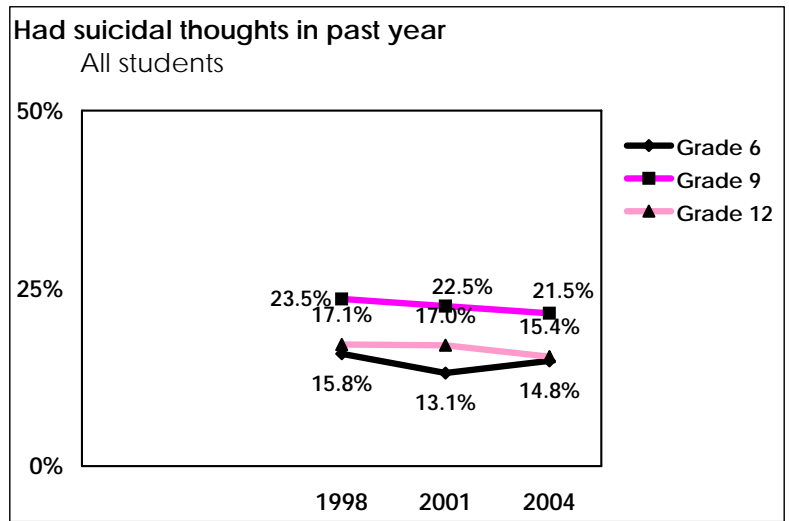
Females, over time and at every grade level, report higher rates of frequent sadness than males. The 6th grade rate (ending at 13.6% in 2004) has been very steady over time. Twelfth graders have reported a slightly decreasing rate, also reaching 13.6% in 2004. However, on this survey question and on subsequent measures of mental distress, 9th grade females present a more vulnerable picture. Regarding persistent sadness, they have reported varying rates overtime, the highest reported in 2004 at 20.5%. This rate is double that of males the same age.



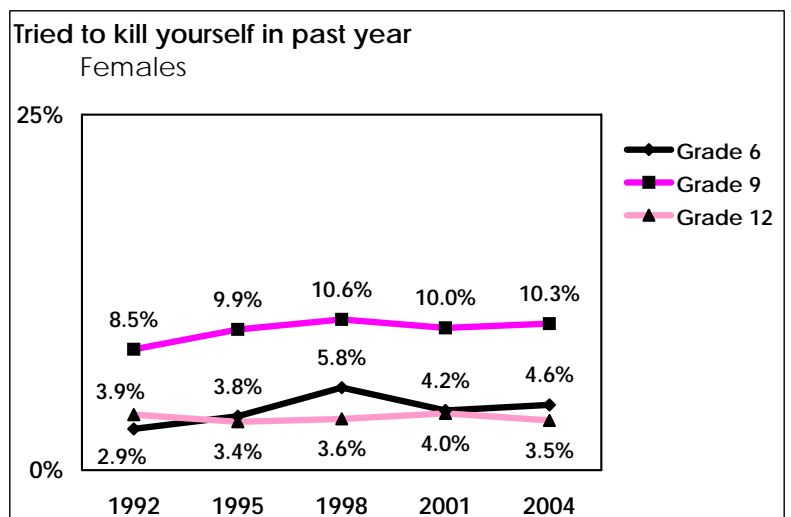
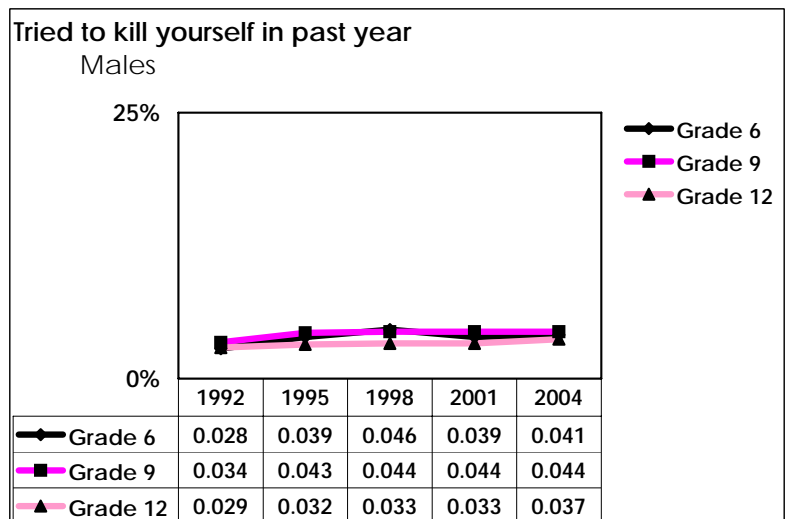
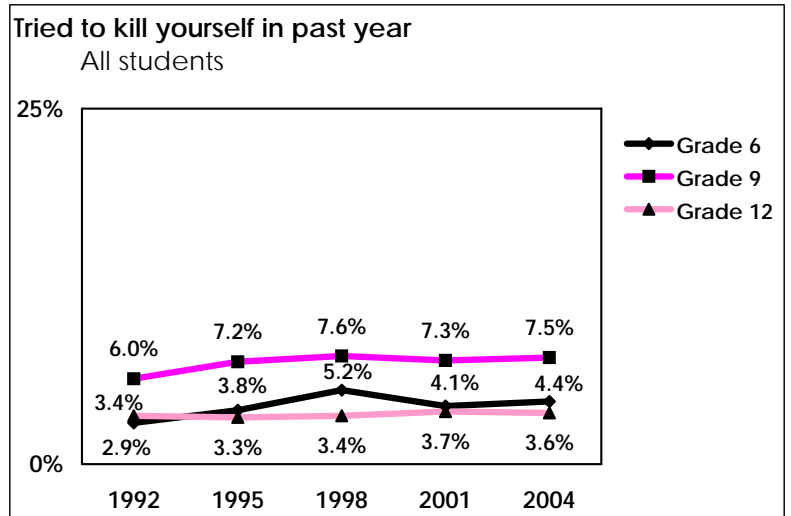
For both genders, the 6th and 9th graders' responses to feeling discouraged or hopeless in the past month were virtually unchanged over the twelve years; 12th graders' rates showed a gradual decline. Ninth graders were approximately 4 percentage points higher than the other two grades in the most recent years. Males had rates very similar for all grade levels and across time, at just over ten percent. Females showed dramatic differences, with rates for 6th grade females steady and at the same level as 6th grade males. Twelfth grade girls saw a decrease in feelings of hopelessness by 5 percentage points from 1992 to 2004, down to the same rate as their male counterparts. Ninth grade females reported significantly higher rates than their male counterparts and also higher rates than 6th or 12th grade females.



In 2004, about 14% of males at all three grade levels reported that they had thought about killing themselves in the past year. There was no change over time. The rate of suicidal thoughts reported by 6th and 9th grade females was slightly higher than males (16% in 2004). But 9th grade females once again reported higher levels of emotional distress. While the rate of suicidal thought declined ever so slightly, it is double that of males and almost double that of younger and older females.



A smaller percentage of young people attempt suicide than experience suicidal ideation. Rates for males have remained flat, close to 4% for each grade over time. For females, the 6th graders' rates varied while the twelfth graders' rates were steady, both similar to the rates for males by 2004, around 4%. The 9th grade females depict more difficulty, reporting suicide attempts at a rate twice that of 6th grade females and three times that of 12th grade females.



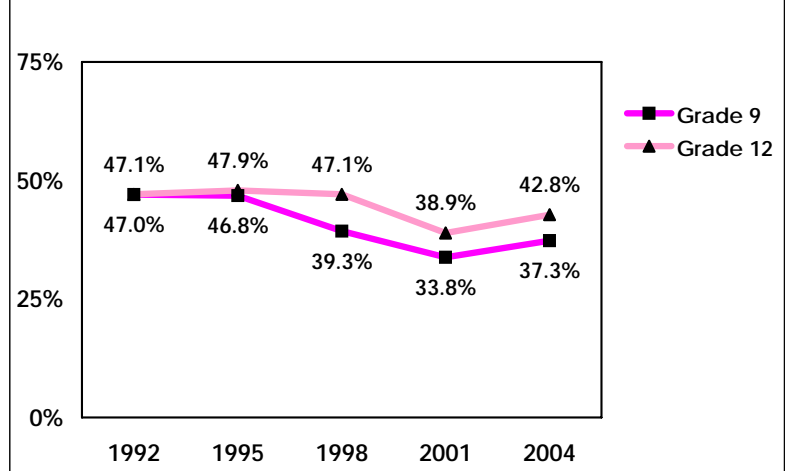
Gambling

Gambling questions are asked of 9th and 12th grades only. Playing cards for money started out at rates near 50% for 9th and 12th graders in 1992. These rates declined in 1998 and 2001 and took an up-turn in 2004, increasing among both 9th and 12th graders by 3 to 4 percentage points; 37.3% of 9th graders and 42.8% of 12th graders reported playing cards for money in the past year.

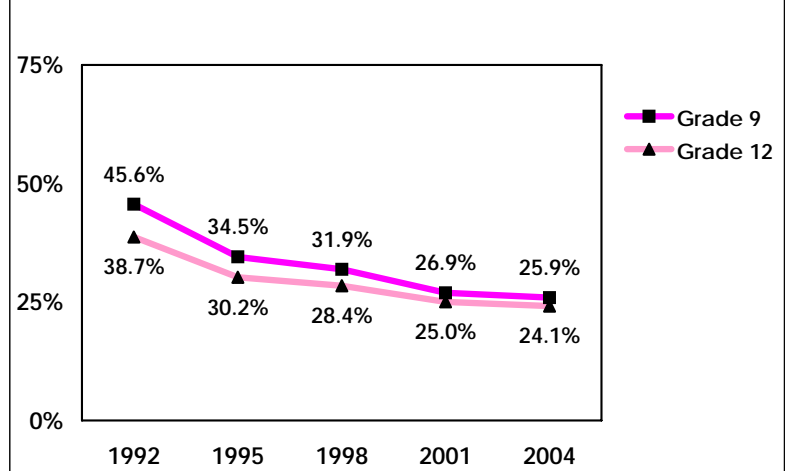
Betting on sports games in the past year has been reported more frequently by 9th graders than 12th graders over time. Both grade levels show a dramatic decline over time with 9th grade rates dropping almost half – from 45.6% in 1992 to 25.9% in 2004. Twelfth grade rates dropped by one-third to 24.1% in 2004.

Students who reported buying lottery tickets and scratch-offs declined to a large extent from 1992 to 2004. This behavior is more prevalent among 12th graders than 9th graders. Students in 12th grade demonstrated a decline overtime from 51.9% in 1992 to 36.3% in 2004. While about 40% of 9th graders reported this type of behavior in 1992, the rate dramatically decreased to 11% in 2004.

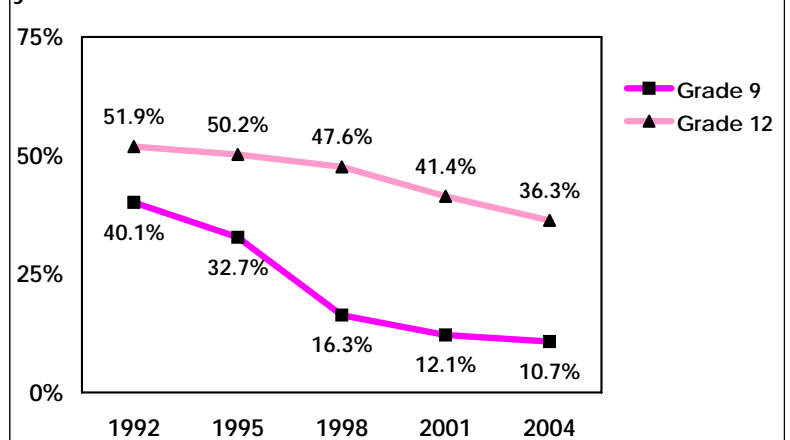
Played cards for money in past year



Bet money on sports teams in past year



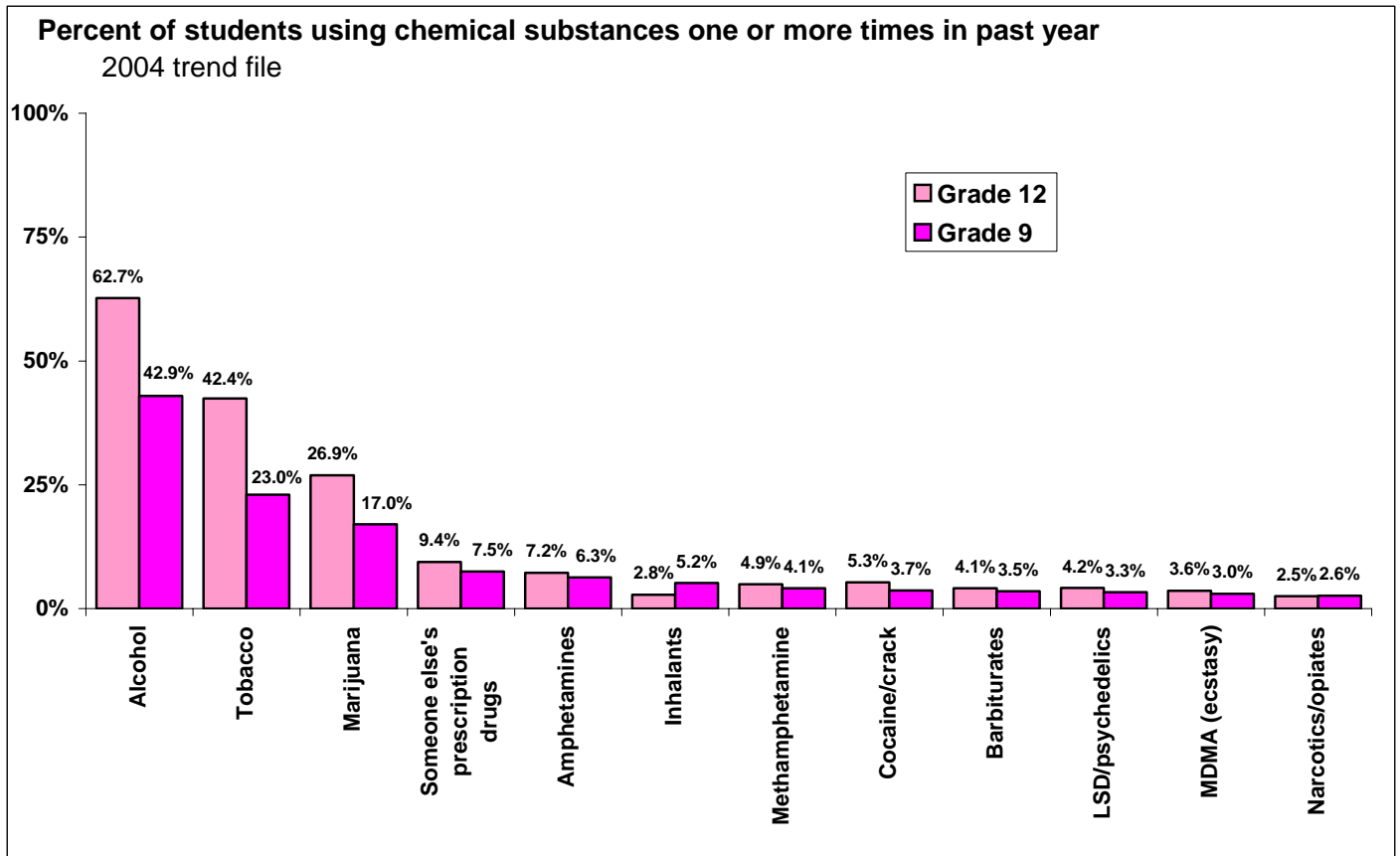
Bought lottery tickets or scratch-offs in past year



Alcohol, Tobacco & Other Drugs

Across Substances

Alcohol was used by a larger percentage of youth (42.9% of 9th graders and 62.7% of 12th graders) than any other substance covered by this survey. Tobacco was the second most used substance, and marijuana and someone else's prescription drug follow as the third and fourth most used substances. Inhalants were more popular among 9th graders than 12th graders while crack/cocaine had a higher ranking among 12th graders.

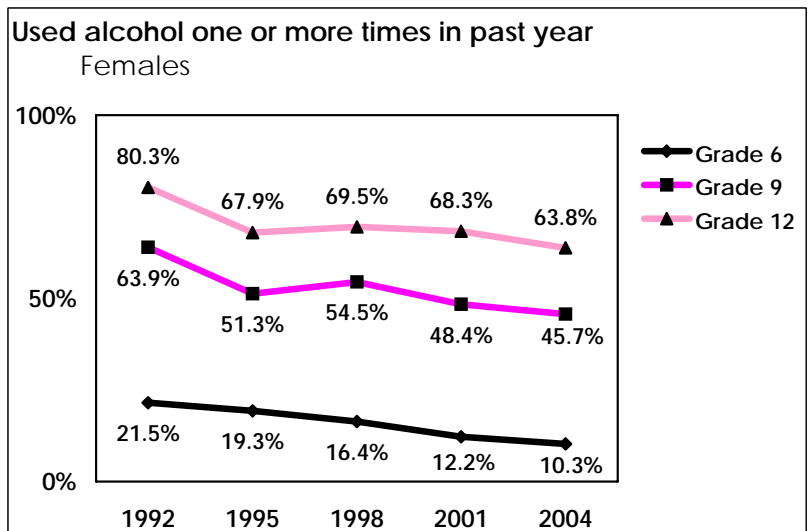
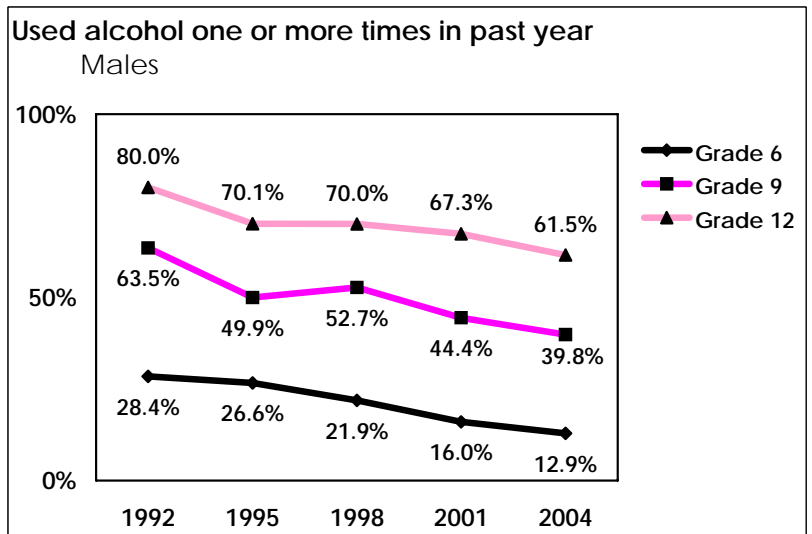
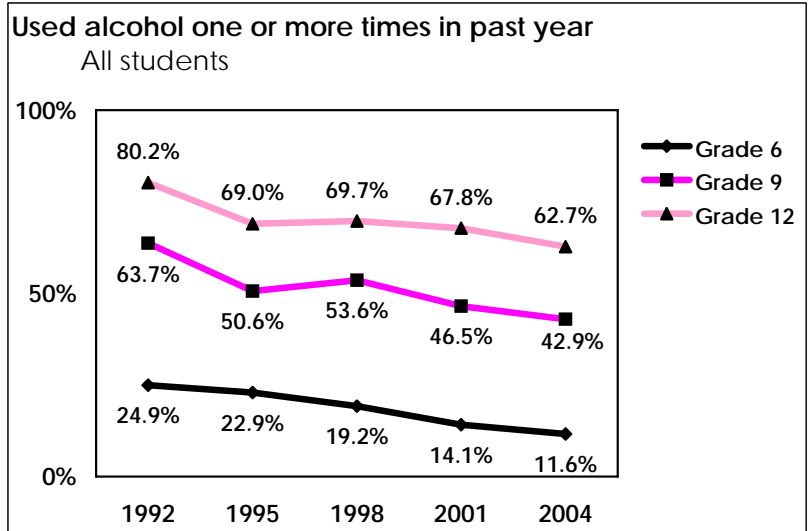


Alcohol Use

Any drinking

The percentage of students who reported using alcohol at least once in the past year shows an overall downward trend since 1992, with a slight increase for 9th and 12th graders in 1998. The decline is most steady among the 6th graders who showed a consistent downward trend since 1992. Even with these decreases, the majority of 12th graders still reported alcohol use in 2004.

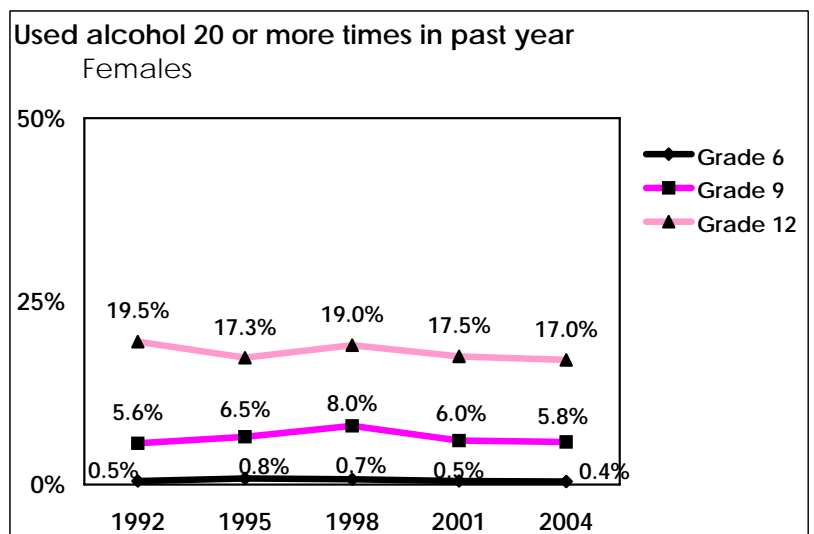
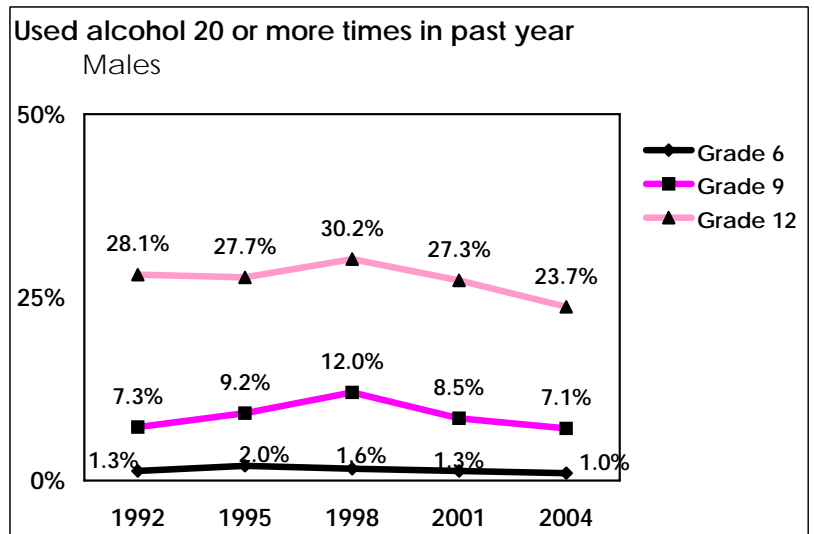
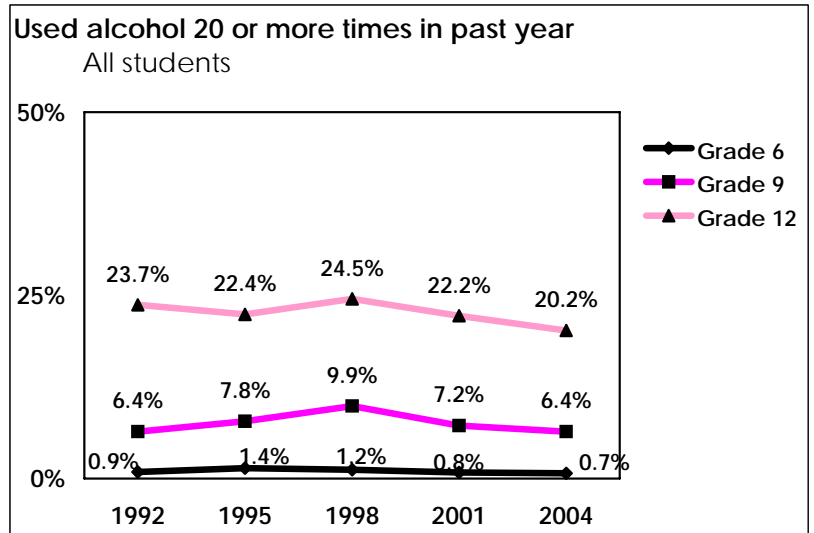
Males and females exhibit similar patterns of declining alcohol use across the years, but use among female students declined less. In 1992, alcohol use among 9th and 12th grade females was similar to the use among males, but in 2004, females in both grades were more likely to drink alcohol than their male counterparts.



Frequent drinking

Rates of frequent alcohol use (drinking 20 or more times during the past 12 months) remained steady around one percent among 6th graders. The prevalence of frequent drinking among 9th graders increased between 1992 and 1998, then the rate decreased in 2001. Rates of frequent drinking among 12th graders were consistently just under 25% between 1992 and 1998. However, the rates decreased by about 2 percentage points in 2001 and again in 2004.

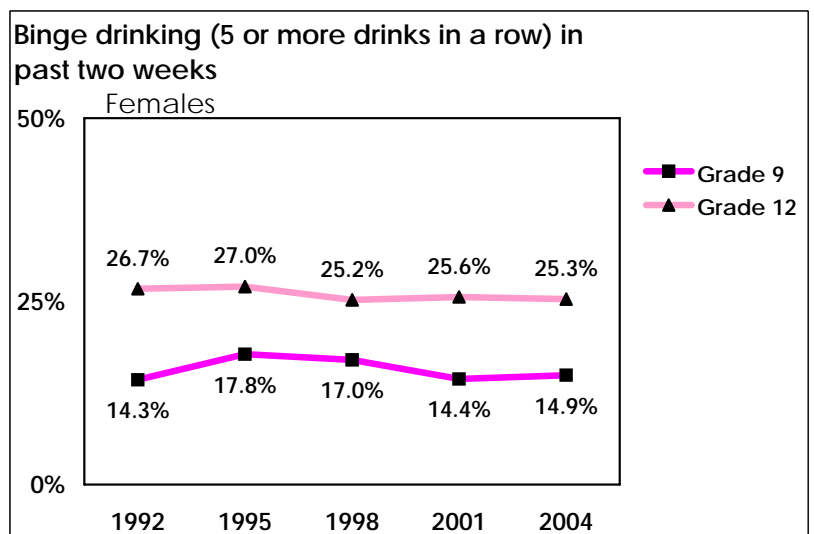
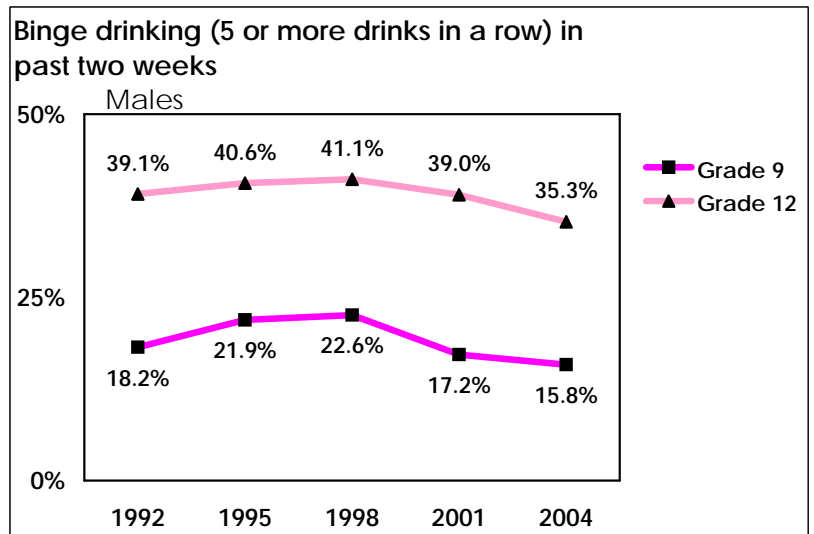
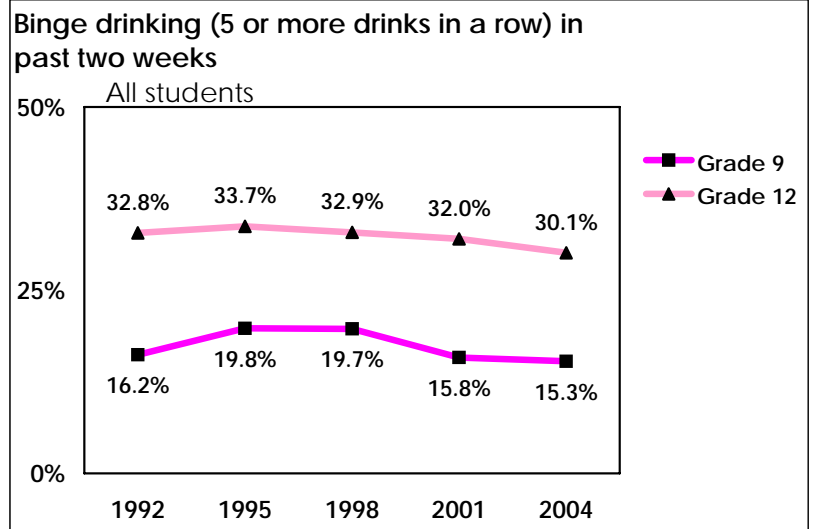
Frequent drinking was more prevalent among males than females across all grades and years. The rates declined by larger amounts among male students than female students, especially for 9th and 12th graders.



Binge drinking

Binge drinking, defined as five or more drinks in a row, remained steady among 9th graders between 2001 and 2004 after a decline of four percentage points between 1998 and 2001. The rate for 12th graders showed a slight decrease from 32.0% in 2001 to 30.1% in 2004.

For both 9th and 12th graders, female students reported lower rates of engaging in binge drinking than male students across the years. However, the percentage of 12th grade male students who engaged in binge drinking declined by about four percentage points between 2001 and 2004, while the percentage of their female counterparts who binged remained steady at around 25%.

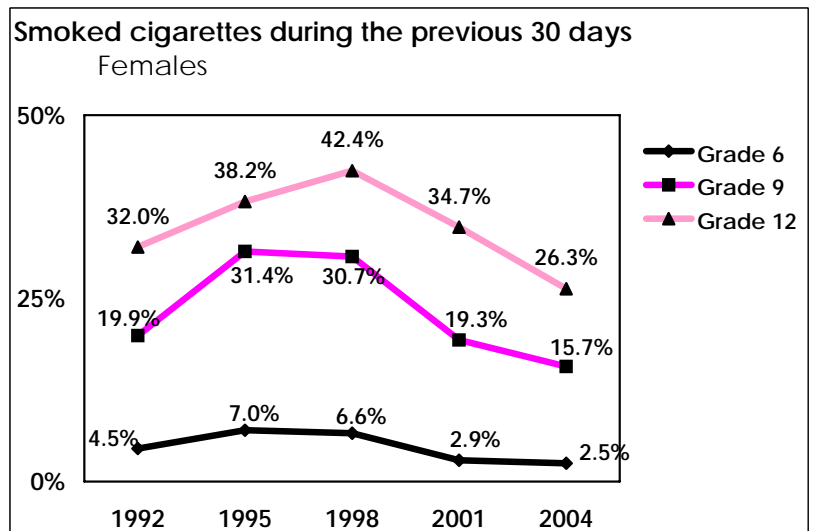
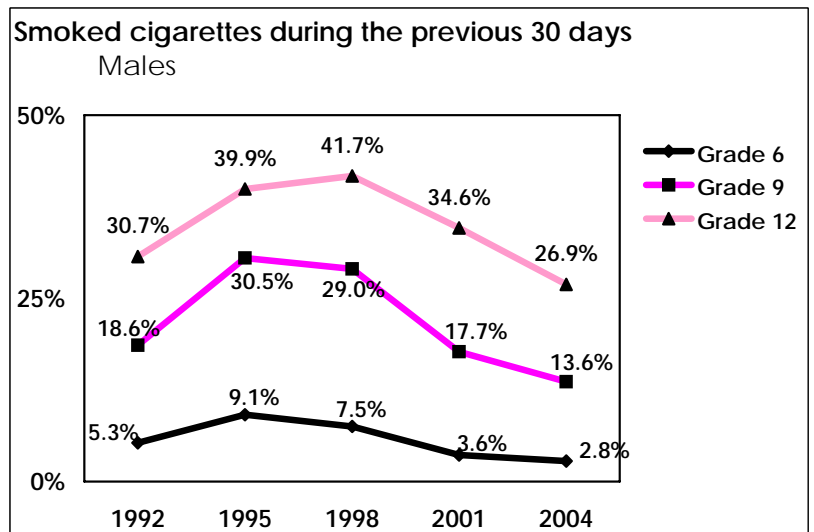
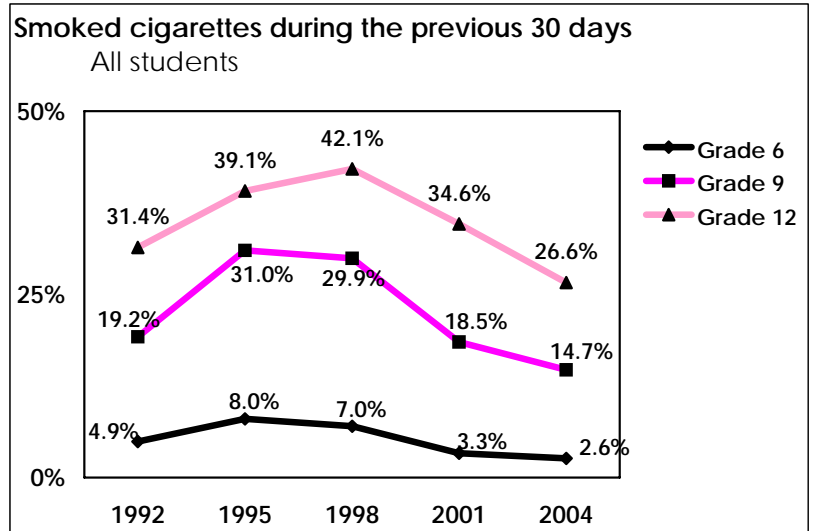


Tobacco Use

Recent use

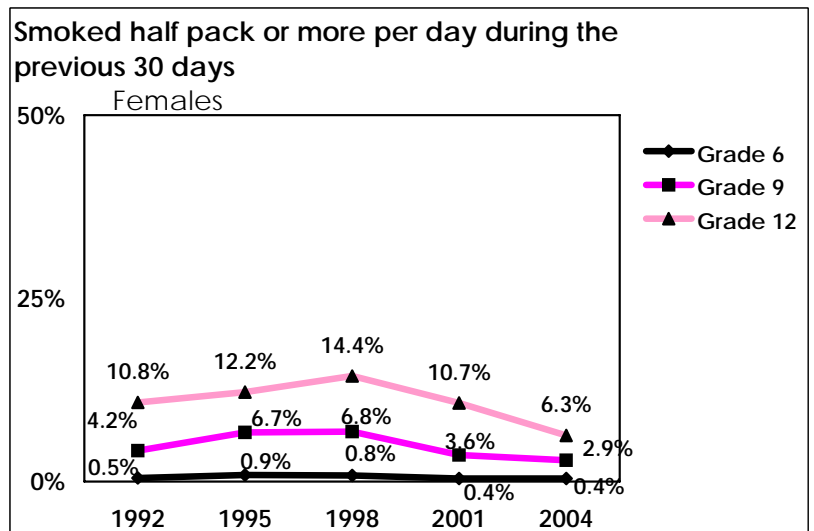
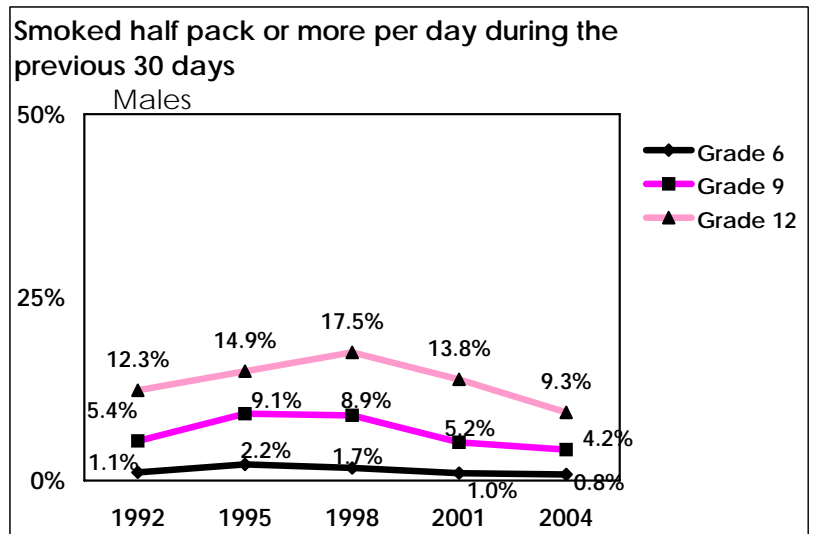
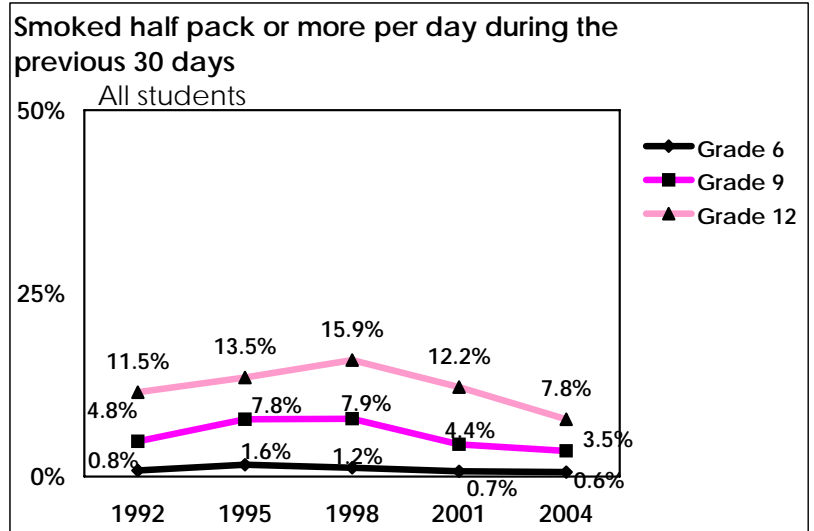
The percentage of Minnesota students smoking any cigarettes during the past 30 days continued a downward trend. After increasing in the early 1990s, the smoking rate among 12th graders dropped from 42.1% in 1998 to 26.6% in 2004. The 6th and 9th grade smoking rates declined slightly between 1995 and 1998, and the rates declined precipitously since 1998; they were cut in half among 6th graders from 7.0% in 1998 to 2.6% in 2004 and among 9th graders from 29.9% in 1998 to 14.7% in 2004. These are the lowest smoking rates ever reported in the history of the Minnesota Student Survey, although more than a quarter of 12th graders still reported smoking cigarettes in the past month.

Tobacco use trends follow quite similar patterns for males and females. However, male students were more likely to smoke than female students in the 6th grade but less likely to smoke in the 9th grade. These differences are slight but consistent throughout the years.



Heavy use

Heavy cigarette smoking (half a pack or more per day) also declined among Minnesota students. After increasing in the early 1990s, heavy cigarette smoking rates declined by about half since 1998 across all grades. These decreasing patterns are quite similar for males and females. Female students consistently showed lower rates than male students across all grades and years.



Marijuana Use

Marijuana use in the past 12 months showed some decline in 2004. After gradual increases in use since 1992, 12th graders finally showed a decrease of about four percentage points in 2004. After a large increase between 1992 and 1995, marijuana use among 9th graders further increased in 1998, then started a down turn in 2001 by about four percentage points and again in 2004 by about three percentage points. The marijuana use rate is much lower among 6th graders and they also showed slight decreases in use since 1998.

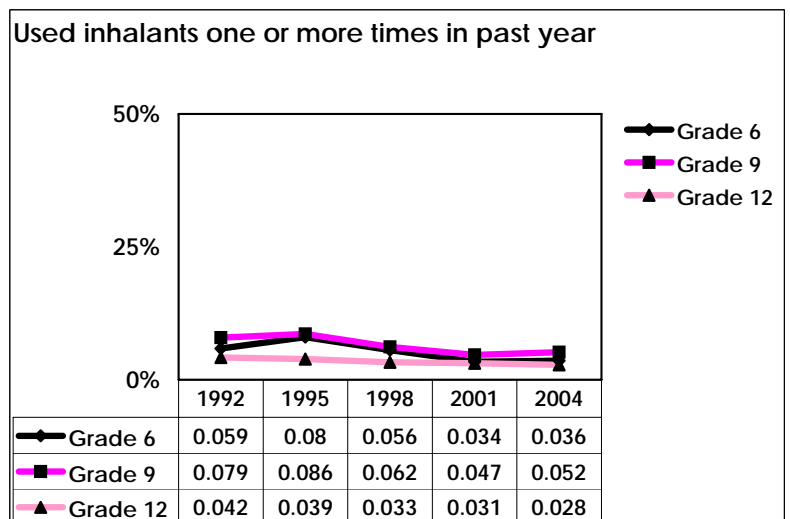
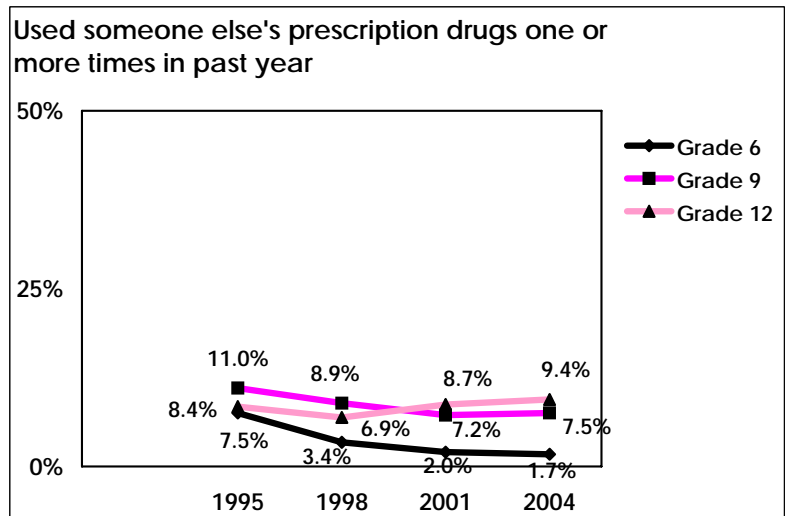
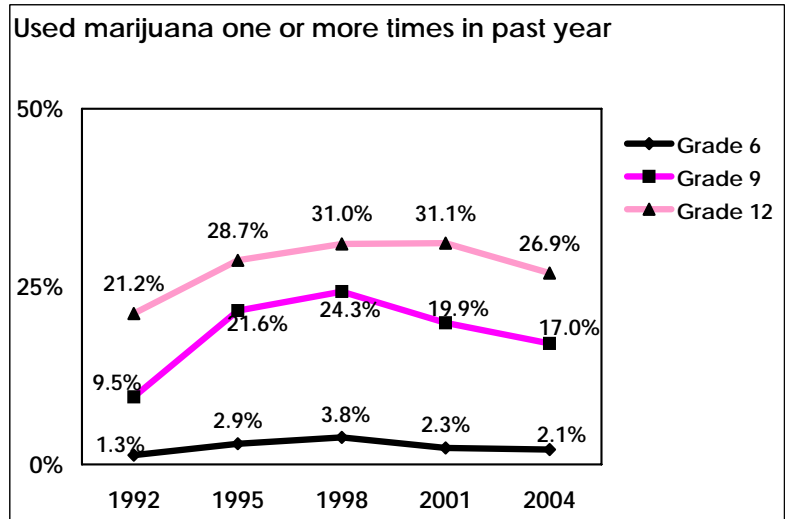
Other Drugs

Someone else's prescription drugs

The percentage of Minnesota 6th and 9th graders who reported using someone else's prescription drugs has declined since 1995. However, it has increased among 12th graders, setting the highest rate ever (9.4%) in 2004.

Inhalants

Unlike other substances, inhalants are used more by younger students than 12th graders across the years. Overall inhalant use shows a gradual decline. The largest decline was reported by 6th graders whose use fell by more than half since 1995.



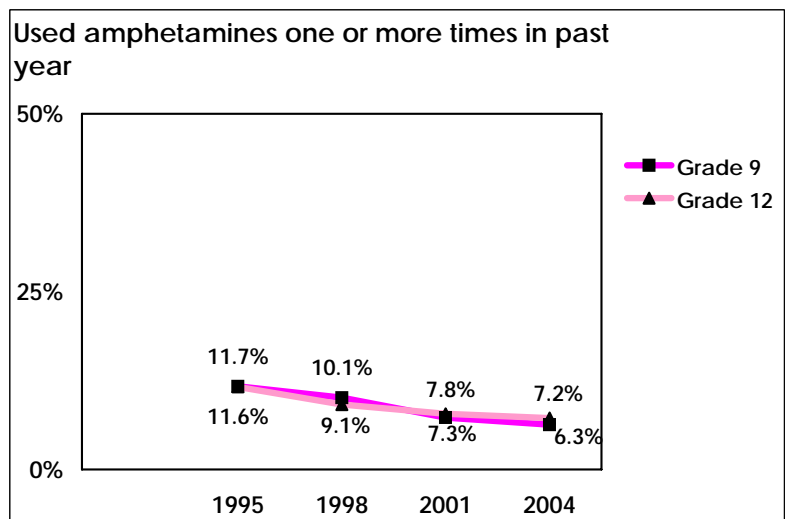
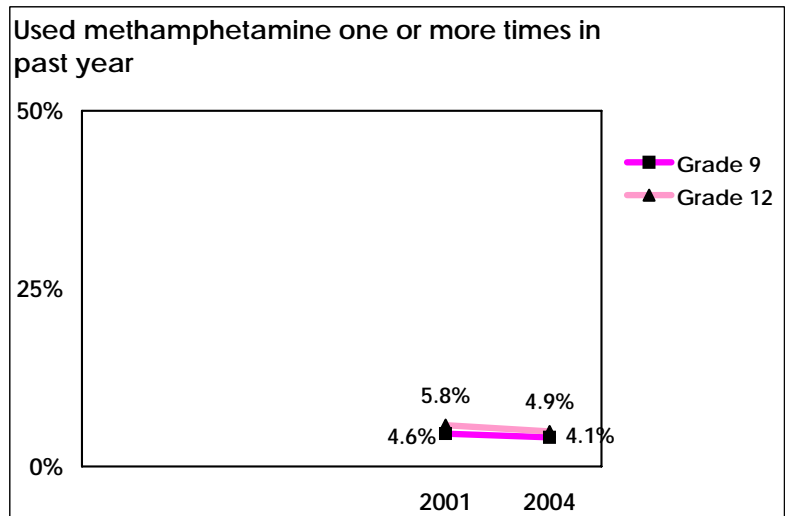
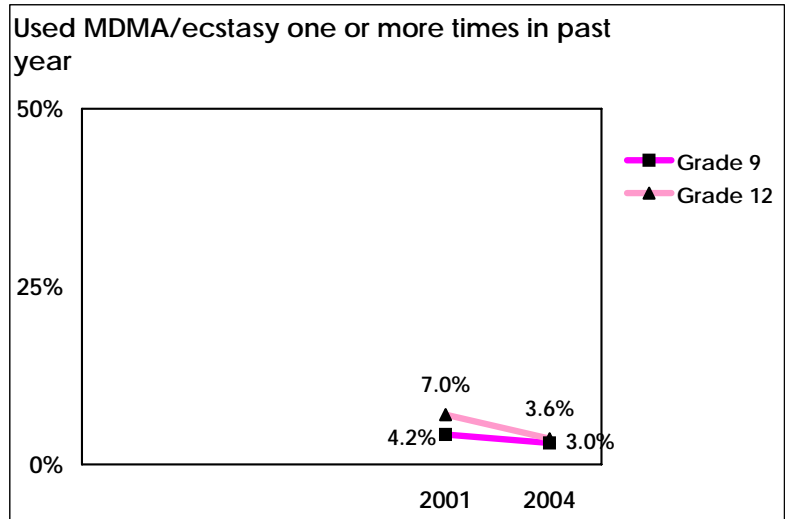
MDMA/Ecstasy

Use of MDMA/ecstasy by Minnesota students also decreased since 2001, when MSS first asked about such use.

Methamphetamines/Amphetamines

In spring 2004 when the student survey was conducted, 4.1% of 9th graders and 4.9% of 12th graders in Minnesota reported using methamphetamines. These rates are slightly lower than those shown in 2001.

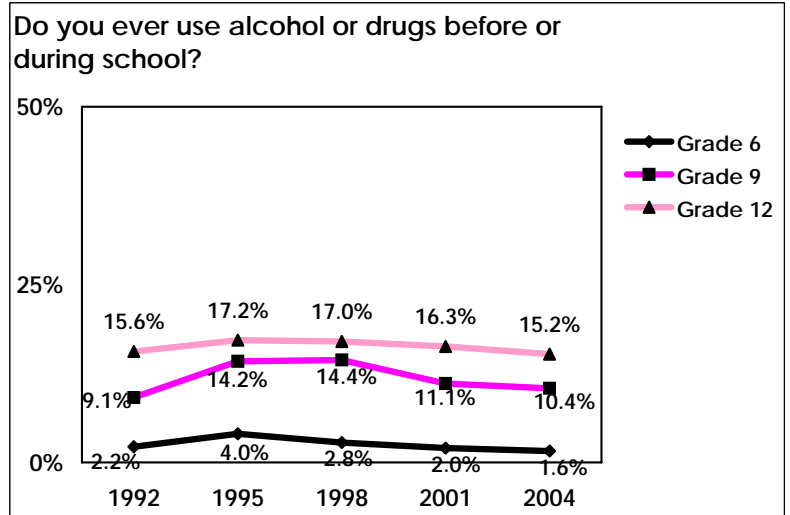
Use of amphetamines also shows a downward trend across the years for both 9th and 12th graders.



Substance Use and School

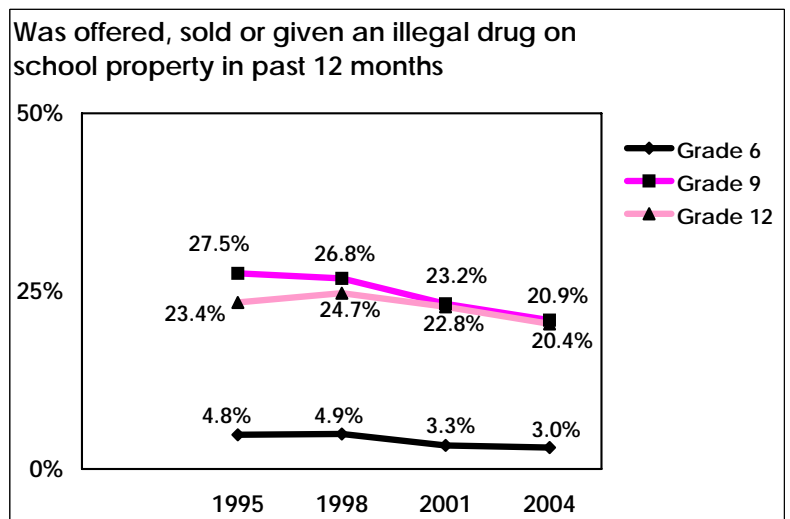
Before and/or during school

Substance use is a serious health risk issue among adolescents. Using addictive substances before and/or during school can have an even more serious effect on students by obstructing their ability to learn at school. After increasing in the early 1990s, the proportion of students reporting substance use before or during school has decreased slightly since 1998.



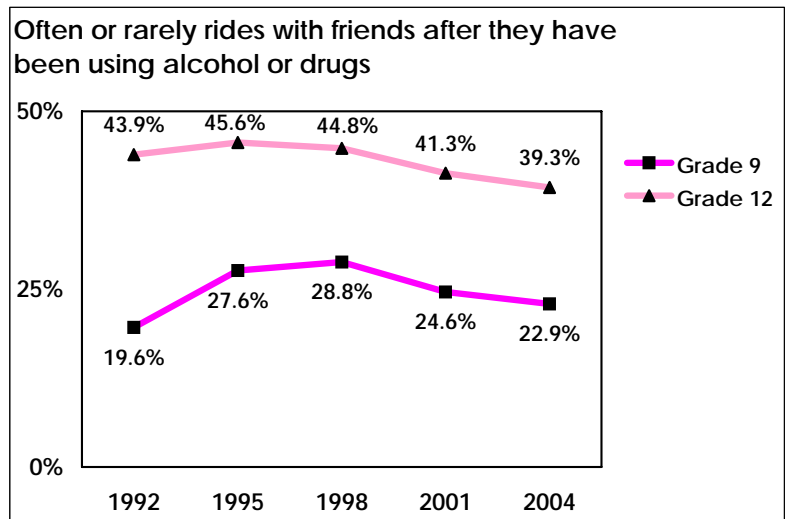
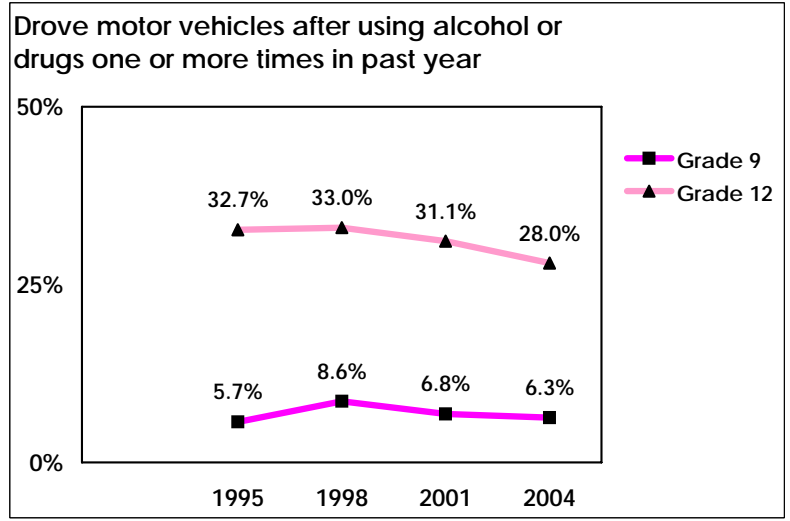
Opportunities to obtain drugs at school

In 2004, more than one in five Minnesota 9th and 12th graders reported being offered, sold or given an illegal drug on school property during the last 12 months. The percentages are much lower for 6th graders. For all grades, the rates show a slight downward trend over time.



Substance Use and Motor Vehicles

Driving motor vehicles after using alcohol or drugs or riding with a friend who has been using alcohol or other drugs follows the general trend of decline. The percentage of Minnesota students who reported such risky behaviors decreased slightly since the mid to late 1990s. However, still more than one-quarter of 12th graders drove motor vehicles after using substances in 2004 and almost 40% of them rode with friends who had been using substances. Although only a small proportion of 9th graders reported driving after drinking or using drugs (probably due to lack of driver's license), in 2004, more than 20% of them reported riding with others who had been using substances.



Comparison with National Trends

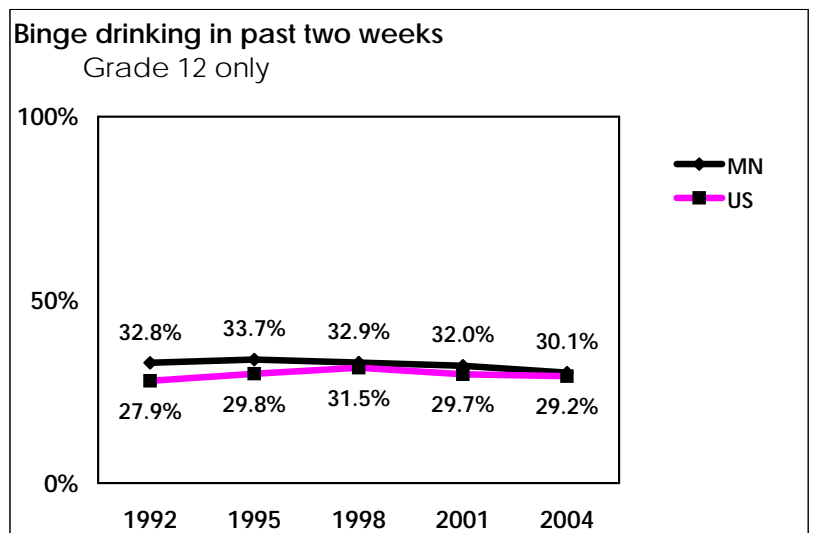
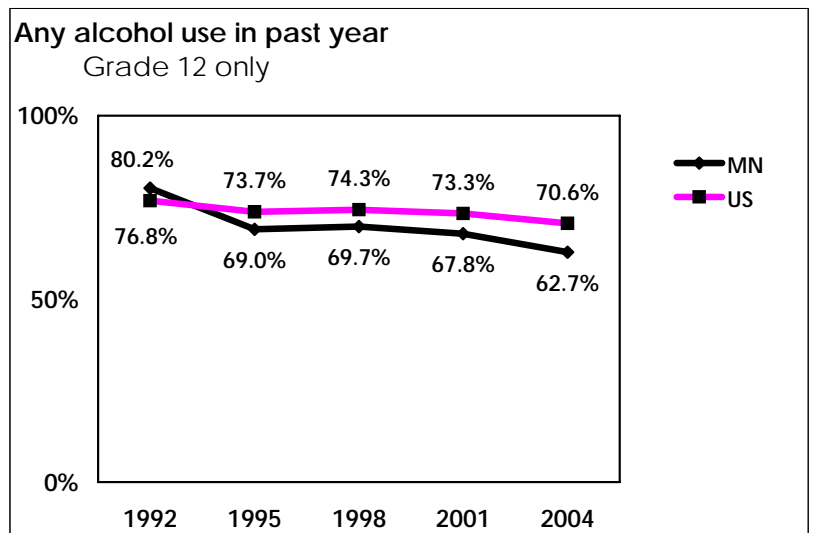
Some of the substance use trends found in the Minnesota Student Survey (MSS) can be compared with national trends based on Monitoring the Future (MTF) findings. MTF is administered annually to approximately 50,000 students in grades 8, 10, and 12 in about 420 public and private schools in the U.S. (www.monitoringthefuture.org). Participating schools are selected randomly from throughout the country to yield a nationally representative sample. Comparisons to MSS are done only for 12th graders because MTF does not survey 6th or 9th graders.

In this section, comparisons are made only where questions in MSS and MTF use identical wording. Differences between the MSS and MTF in their sampling and field procedures call for caution in interpreting these comparisons: MTF includes both public and private schools and employs sampling strategies, whereas the MSS targets the whole student population in public schools; MTF surveys for 12th graders were confidential but not anonymous (to allow follow-up) whereas MSS is confidential and anonymous.

Alcohol use shows a gradual decline over the years among 12th graders, both nationwide and in Minnesota. Alcohol use by Minnesota students declined below the national level in 1995, and the gap has increased ever since. In 2004, use by Minnesota 12th graders was almost eight

percentage points below the national rate. Even with the decline, alcohol use remains widespread among 12th graders, with more than two out of three students nationwide having consumed alcohol over the years.

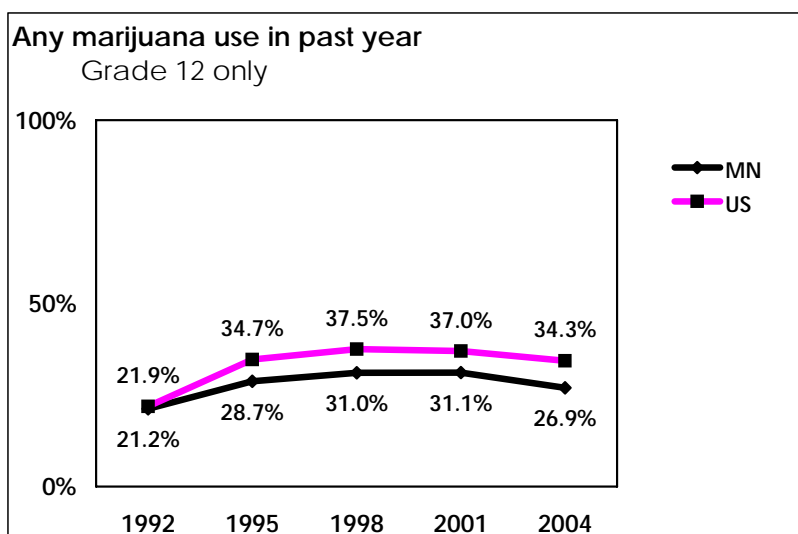
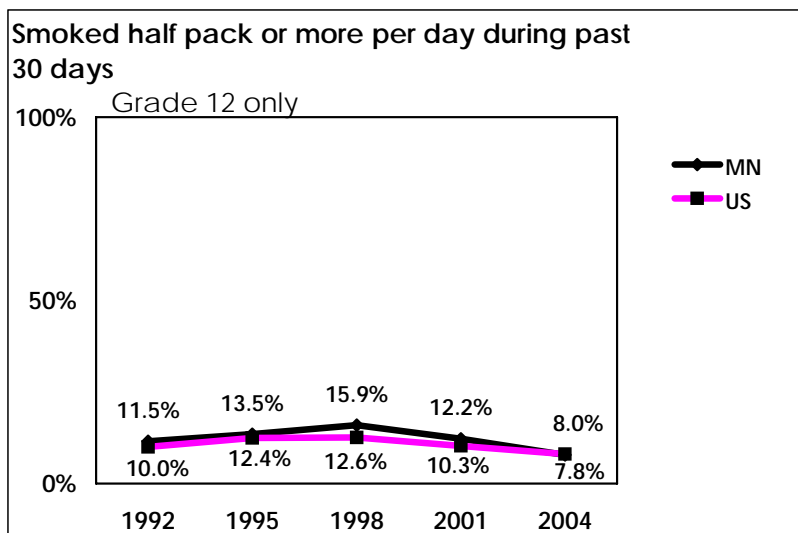
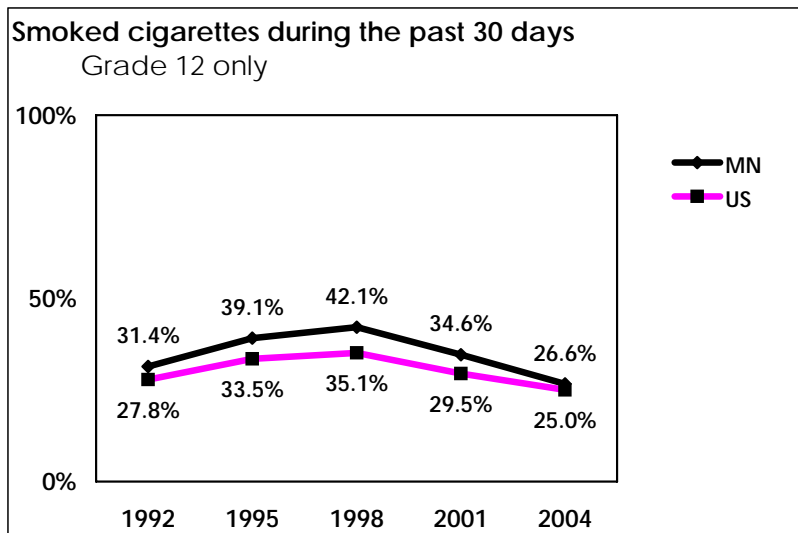
Although the rates of any alcohol use are lower among Minnesota students than their US counterparts, the rates of binge drinking (defined as having five or more drinks in a row at least once in the past two weeks) have been slightly higher in Minnesota than in the US; the difference has been decreased to less than one percentage point in 2004.



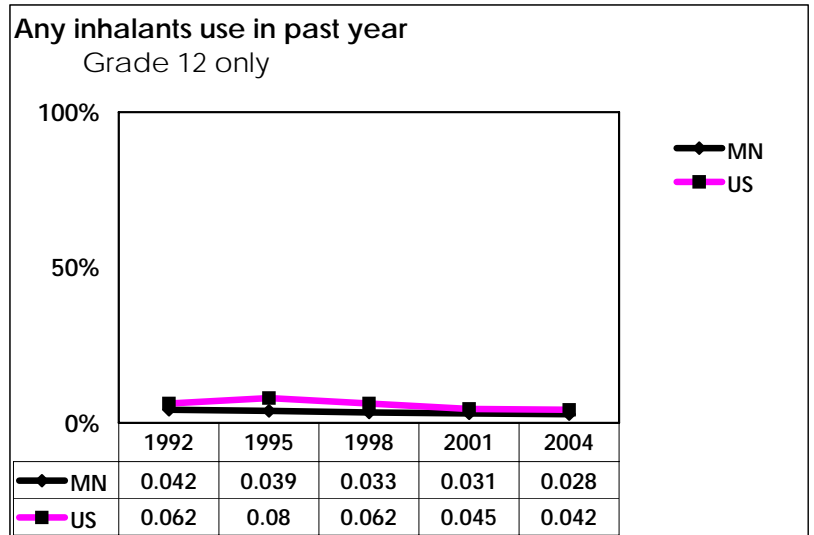
Smoking rates among 12th graders started to decline in 1998 both nationwide and in Minnesota. The number of teen smokers is still substantial: 25% of US 12th graders reported smoking cigarettes in the past 30 days in 2004 and the numbers have been higher among Minnesota students throughout the years. However, the downward trend since 1998 is more pronounced among Minnesota 12th graders: Minnesota students showed more than a 15 percentage point decline since 1998 whereas the nationwide decline was about 10 percentage points.

There has been a similar downward trend in students' heavy smoking rates since 1998 both nationwide and in Minnesota. The number of heavy smokers (defined as smoking half a pack or more per day) decreased by about 8 percentage points since 1998 among Minnesota 12th graders, compared to the 4.6 percentage point decline among US 12th graders, making the Minnesota rate just under the national rate in 2004 for the first time.

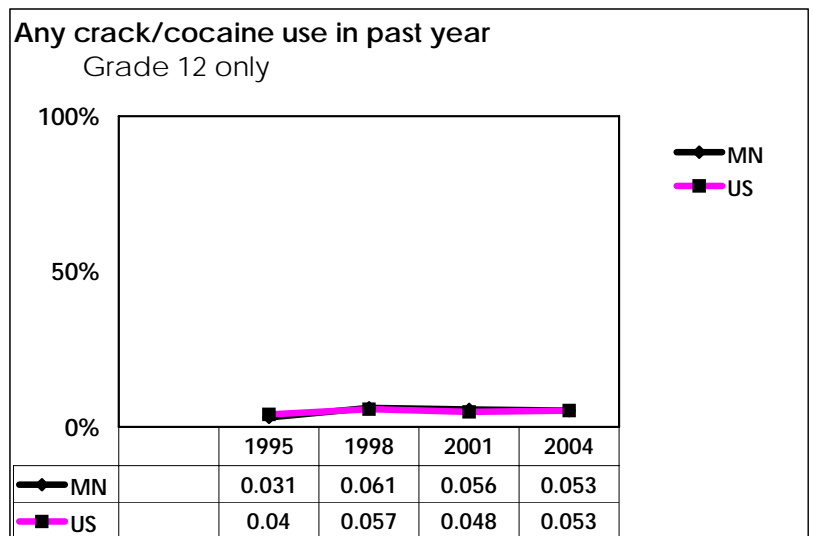
After an upward trend in use throughout the 90s, marijuana use among 12th graders finally showed some decline in 2004 both nationwide and in Minnesota. Minnesota 12th graders have been consistently below the national levels in marijuana use since 1992. In 2004, over one-quarter of Minnesota students (27%) reported any marijuana use during the past year compared to more than a third of US students (34.3%).



A relatively small percentage of 12th graders (less than 10% in the US and less than 5% in Minnesota throughout the years) reported any inhalant use during the past year. Inhalant use by Minnesota 12th graders has been consistently below the national level. The rates in Minnesota showed only a slight decline in the 1990s, and remained steady at around 3% since 1998. National rates of inhalant use declined to 4.5% in 2001 from its recent peak of 8% in 1995, but remained steady at a little above 4% in 2004.



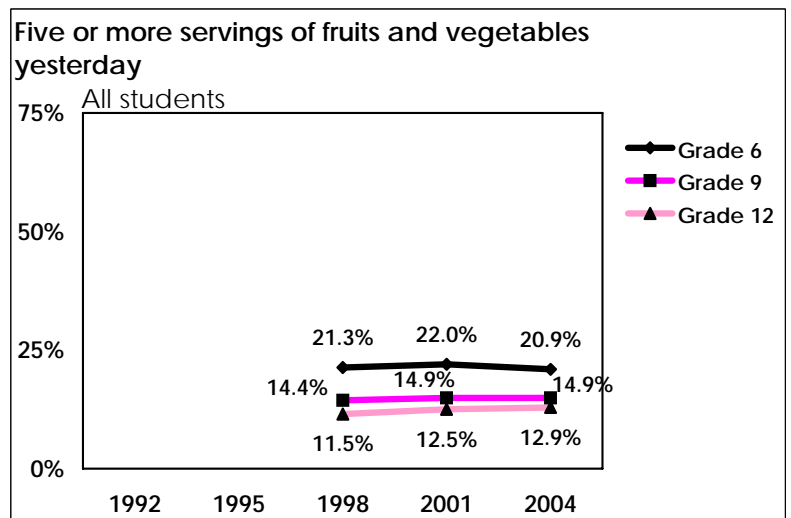
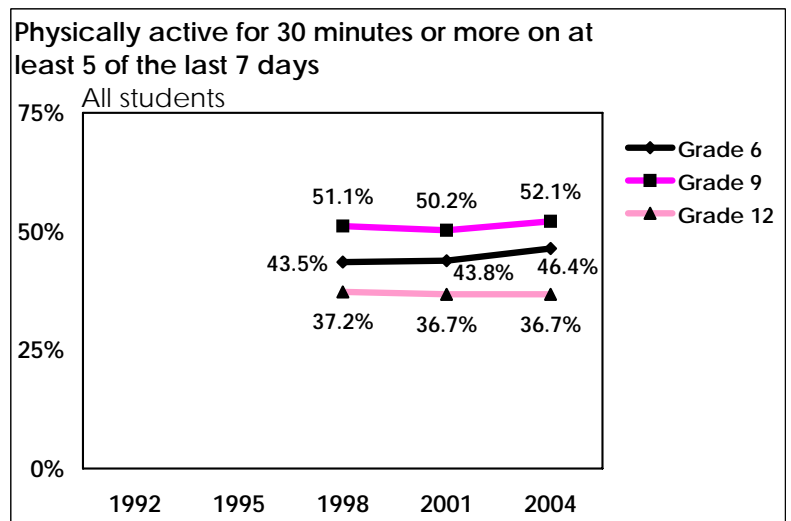
Cocaine and crack use held generally steady in recent US and Minnesota surveys at levels somewhat below their recent peaks of about 6% in 1998. Since 1998, Minnesota 12th graders have shown about the same rate of cocaine/crack use as their US counterparts.



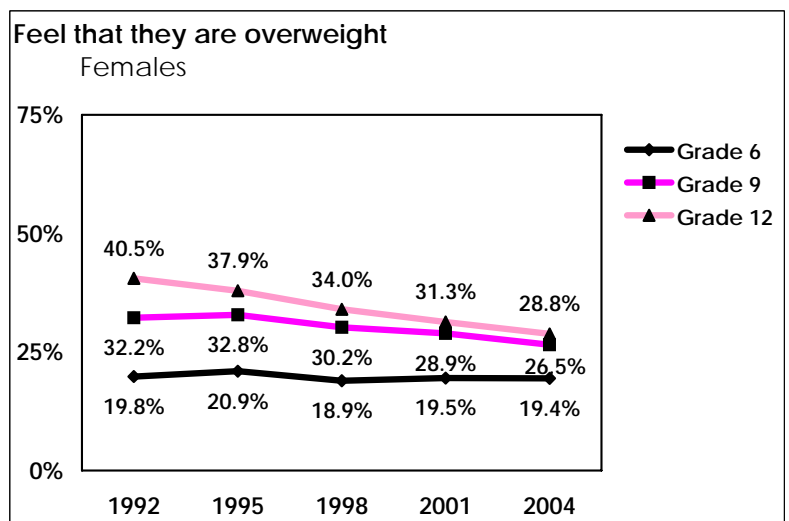
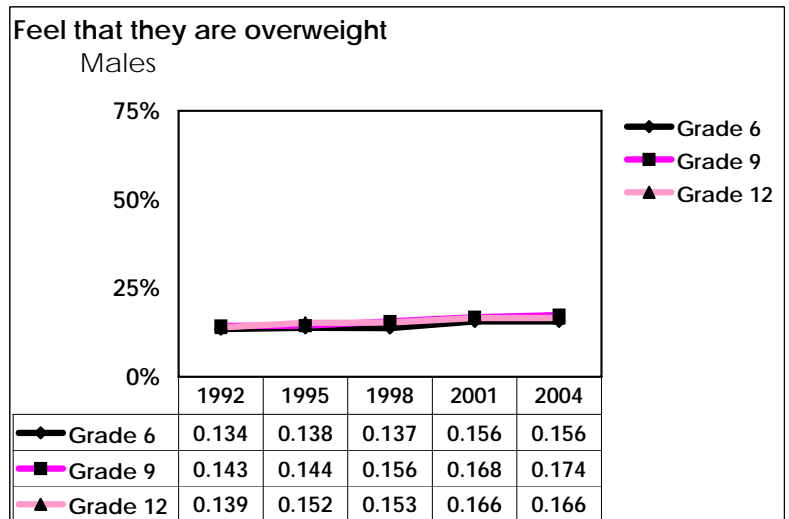
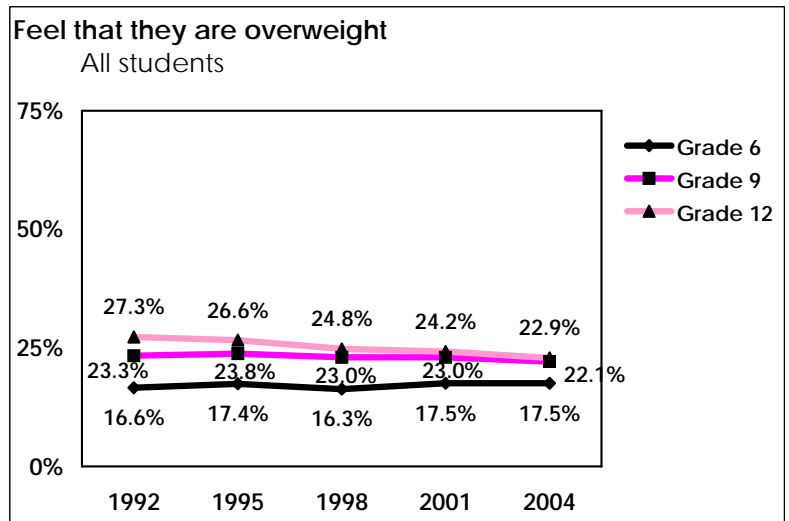
Other Health Behaviors

Physically fit youth and adults have better concentration, motivation and stamina. Measured since 1998, physical activity for 30 minutes a day at least five days per week has stayed level for Minnesota students. Sixth graders reported regular exercise at a rate below 50%. Ninth graders reported a rate just above 50%. Just over one-third of twelfth grade students reported getting this level of exercise.

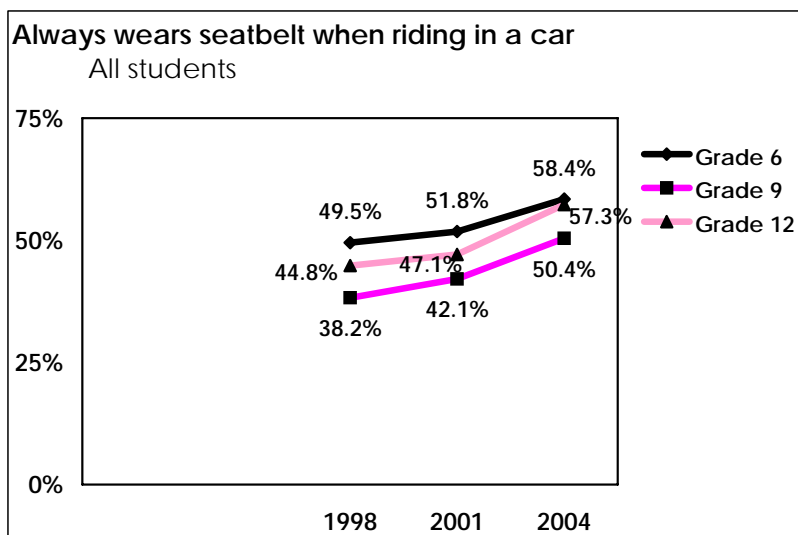
Another health standard is eating five or more servings of fruits and vegetables per day. Since 1998 this measure has not changed within each of the grade levels. Only one in five 6th graders reported consuming the recommended amounts of fruits and vegetables in the day prior to the survey administration. Yet this was the best of the rates reported, with 9th graders reporting only a rate of 15% and 12th graders reporting a rate of 13% meeting this nutrition standard.



The percentage of males who feel they are overweight has been remarkably stable over time. Males at all grade levels – 6th, 9th and 12th – showed a rate in the mid-teens, one that is unchanged over time. Females at all grade levels reported a higher rate of feeling that they are overweight. Sixth grade females reported a trend line that is flat over time at nearly 20% feeling overweight. In the early 1990's, one-third of 9th grade females reported feelings of being overweight and this has gradually declined to just over one-quarter in 2004. The most dramatic shift has been in the 12th grade females, where the percentage who felt they were overweight declined from just over 40% in 1992, to just under 30% in 2004.



One measure of behavior that reduces injury is consistently wearing a seatbelt when riding in a car. Sixth grade students increased their reported rate of "always" using a seatbelt while riding in a car by nine percentage points – from 49.5% to 58.4% between 1998 and 2004. Ninth grade students reported the lowest seat belt use, but demonstrated a significant increase – from 38.2% in 1998 to 50.4% in the most recent survey. Twelfth graders reported an earlier rate of 44.8% and most recently reported "always" using seatbelts 57.3% of the time.

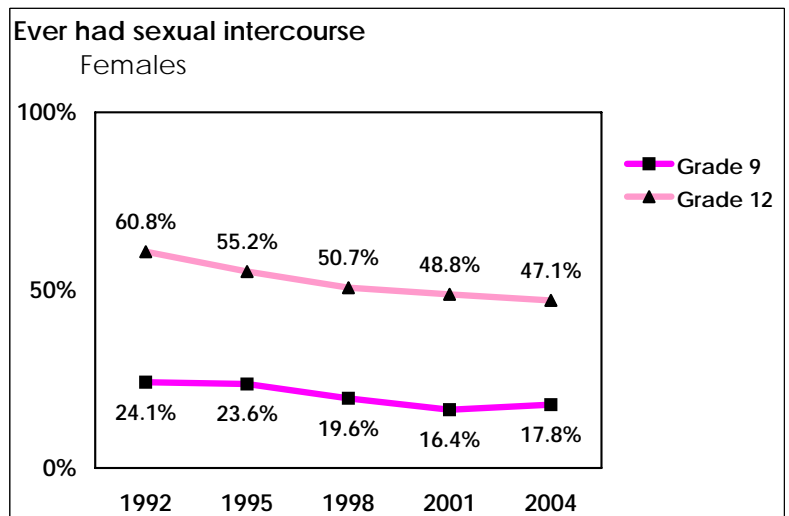
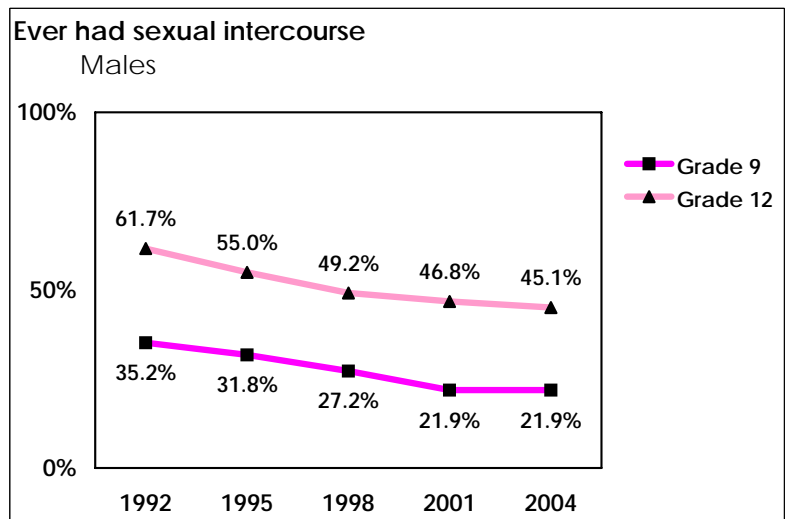
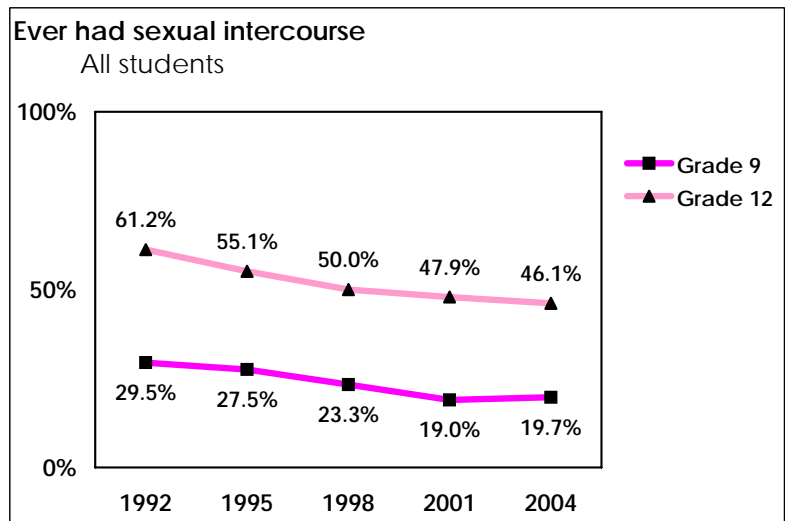


Sexual Behavior

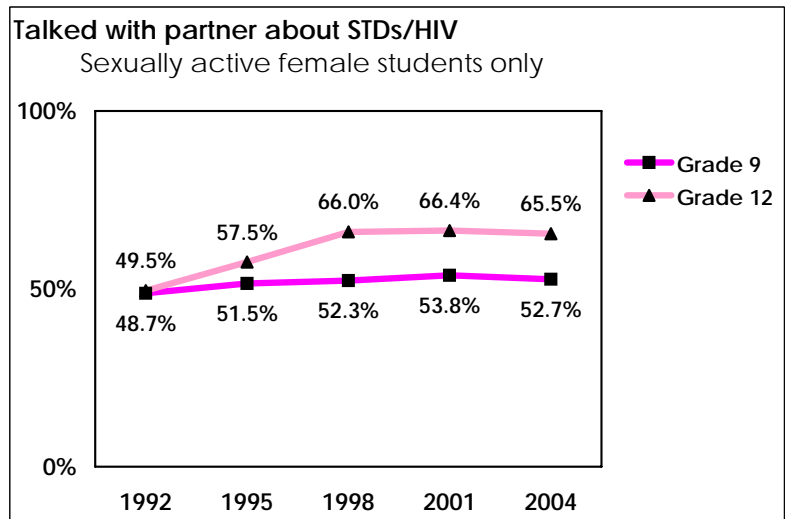
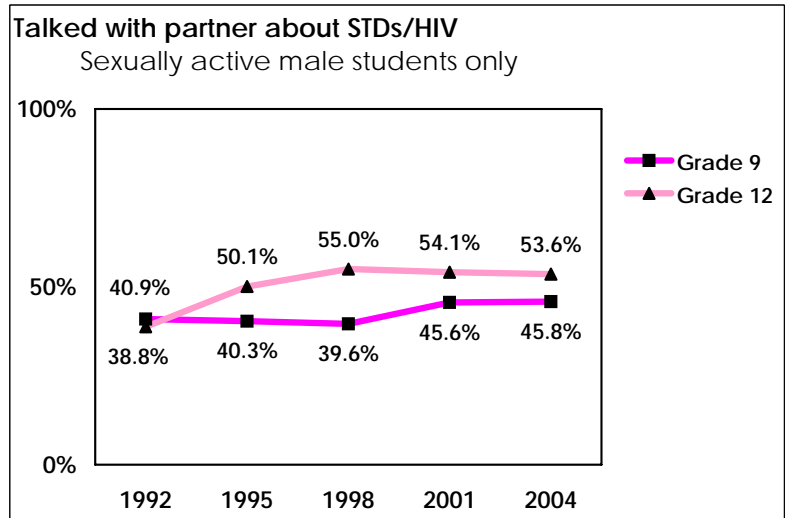
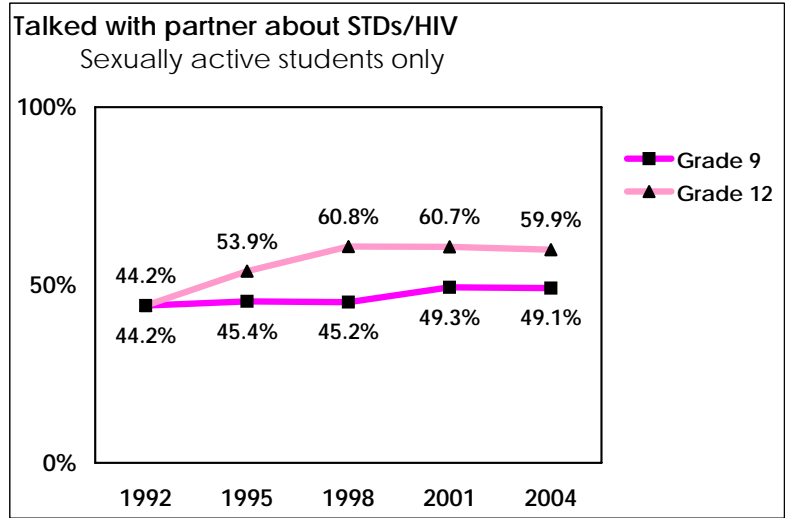
The percentage of students who report having engaged in sexual intercourse at least once fell steadily between 1992 and 2001. However, this encouraging downward trend lost strength between 2001 and 2004.

For 9th grade males, the percentage that report having engaged in sexual intercourse fell from 35.2% in 1992 to 21.9% in 2001 and then remained the same between 2001 and 2004. Among 9th grade girls, the percentage engaging in sexual intercourse also decreased steadily from 24.1% in 1992 to 16.4% in 2001, but then increased slightly to 17.8% in 2004.

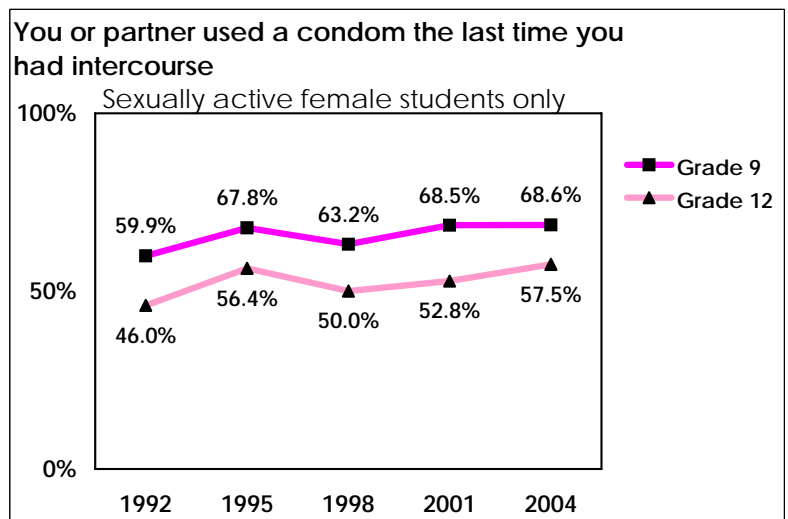
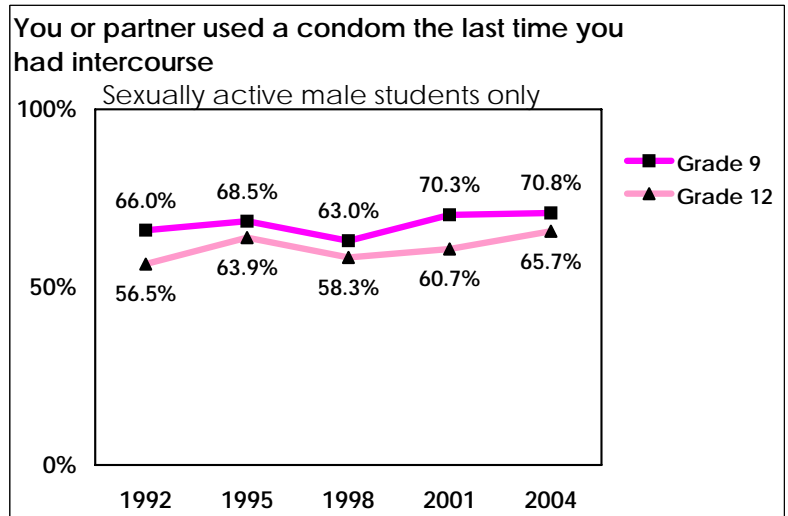
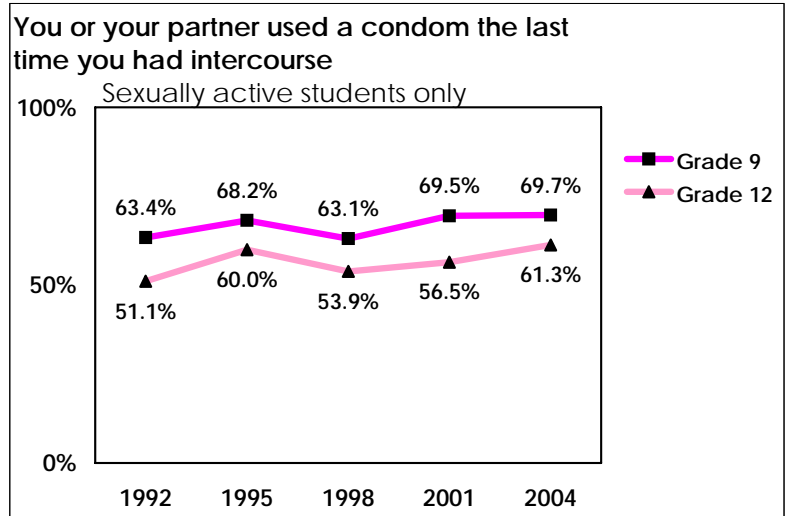
Reported sexual activity among 12th grade males and females declined substantially and steadily between 1992 and 2001, followed by a much smaller decrease (less than two percentage points) between 2001 and 2004.



Compared to 1992, a greater percentage of sexually active students now report having talked with their sexual partner about protection from sexually transmitted diseases and HIV/AIDS. However, all of the positive change in this indicator occurred in the mid- and late nineties. Since 1998, there has been no improvement in the percentage of sexually active males and females who report discussing protection from disease with their partner.



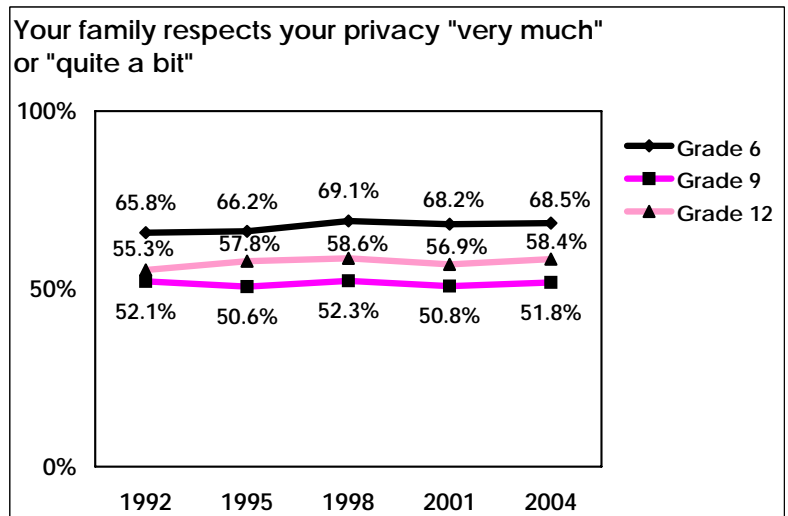
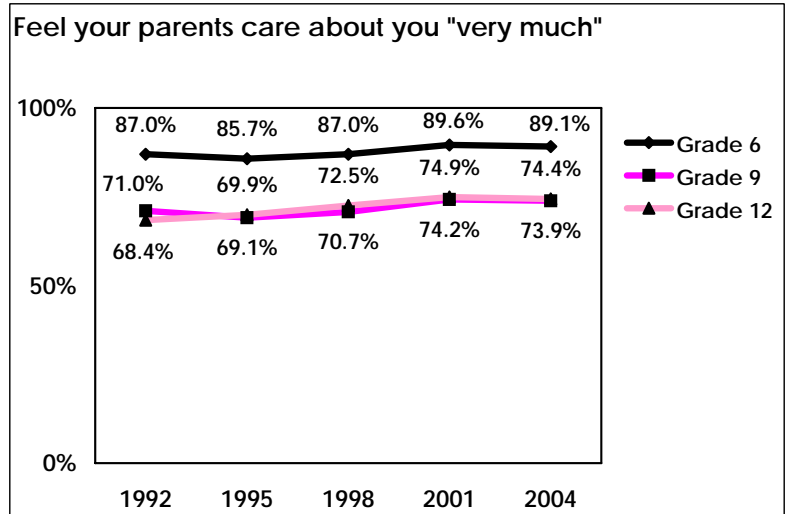
More use of condoms was reported by sexually active students in 2004 than in 1994. In the more recent period of 2001-2004, the percentage of sexually active students who reported that a condom was used the last time they had sexual intercourse remained unchanged for 9th grade students and increased for 12th grade students.



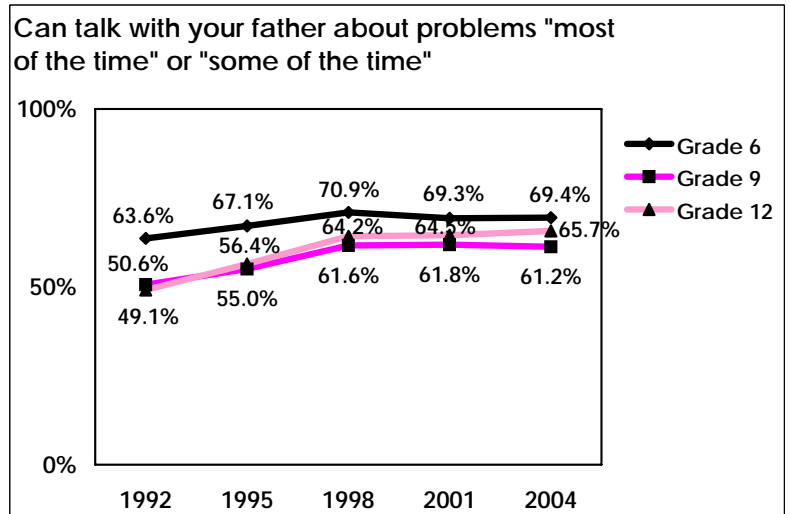
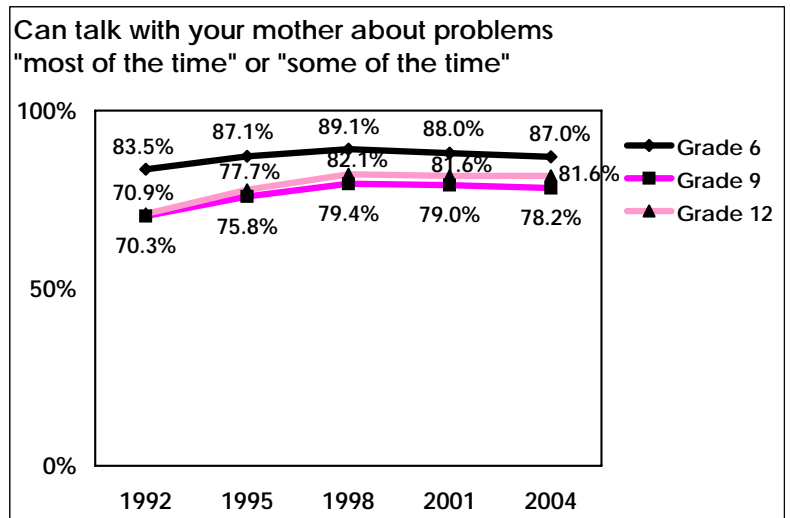
Families

Positive relationships between youth and their parents have been consistently high over time, especially for younger students – nine out of ten students in 6th grade saying their parents care “very much.” Nearly three of four 9th graders and 12th graders give their parents the same high mark.

A majority of students also say their family respects their privacy. The reported rates have held steady for all three age groups for all administrations of the survey. Over two-thirds of 6th graders (68.5%) reported that their families respected their personal privacy.

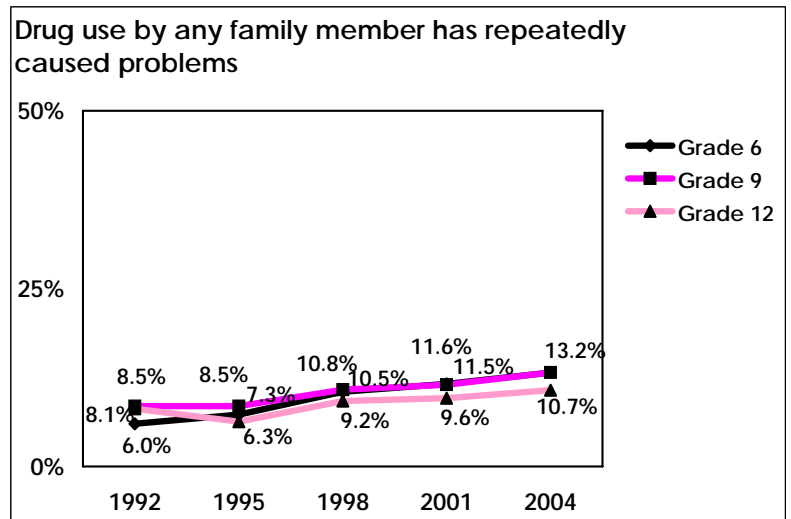
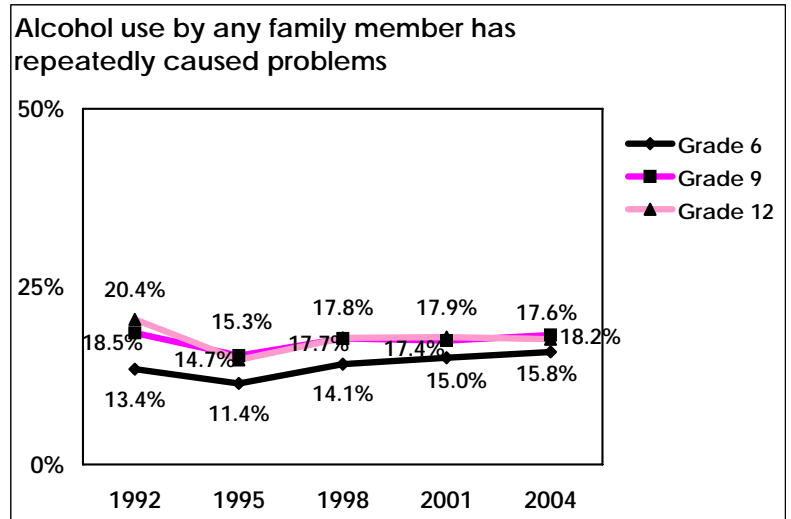


Regarding communication with parents, all students reported mothers being more approachable than fathers. Students in the early nineties reported an improvement in communication with both mothers and fathers and the results have been steady since then. Nearly nine out of ten sixth graders reported that they could talk to their mothers most or some of the time, and seven out of ten reported that they could talk to their fathers most or some of the time. Ninth and 12th graders reported connecting with their parents at rates lower than 6th graders.



Students are in no way immune to trouble in their families. One question on the survey asks if alcohol use by any family member “repeatedly caused problems such as family, health, job or legal problems.” At all grade levels, less than one-fifth of students reported such problems. The rates for all grades dipped in 1995 and have risen gradually for 6th graders and 9th graders since then.

The same question was asked about repeated consequences of drug use by anyone in the family. The 6th and 9th grade students reported an increase over time with the rate for 6th graders in 2004 being more than double the rate in 1992—13.2% as compared to 6.0%. Ninth graders reported a rate in the early 1990s of 8.5% and an increase to 13.2% in 2004. Twelfth graders reported a decrease in the mid 1990s and have reported a steady increase since then to 10.7%.



Technical Notes

Defining the Sample of School Districts for Trend Analysis

Not all school districts participate in the Minnesota Student Survey each time it is offered. In order to accurately compare state results across years, this report analyzed data only from school districts that participated in each of the last five years the survey was conducted -- 1992, 1995, 1998, 2001 and 2004. If a school district did not participate in one of these years, none of its survey data between 1992 and 2004 was included in the analysis for the trend report. If just one grade level in a school district (such as 6th grade) did not participate in one of these years, the survey data for that grade level in that district was excluded for all years from the analysis.

Selecting only school districts that consistently participate over the years ensures that differences seen from year to year are not merely the result of which school districts happened to participate or not participate in a given year. Fortunately, the great majority of school districts have consistently participated in the survey. Between 1992 and 2004, about 650,000 students from regular public schools completed surveys; more than 560,000 of these students (86%) attended school in districts that participated in the survey all five times between 1992 and 2004 and are thus included in the analysis for this trend report.

Weighting the Data to Adjust for Student Participation Rates

For various reasons, some students do not take the survey when their schools offer it. Student participation rates vary from one school district to another and from one survey year to another. A school district with a very high participation rate would therefore contribute more surveys to the dataset than one would expect from its share of the statewide student population.

A weighting procedure was used to adjust for differences in student participation rates among school districts in a given year. The weighting procedure was conducted independently for each grade of each school district and within each survey year.

Each school district's weight was created by dividing the school district's enrollment [*E*] (for a given grade and year) by the total enrollment of all school districts participating in the survey (for that grade and year). This ratio was then multiplied by the ratio of total statewide surveys [*S*] (for a given grade and year) to the number of surveys completed in the individual school district (for a given grade and year).

$$\text{Weighting factor} = \frac{E(\text{dist})}{E(\text{state})} \times \frac{S(\text{state})}{S(\text{dist})}$$

Where, for each grade level:

E(dist) = '03-04 enrollment in district,
E(state) = total '03-04 enrollment in all districts participating in MSS,

S(state) = total surveys completed statewide,
and

S(dist) = total surveys completed in district.

This formula weights each survey so that the school district contributes to the total student survey dataset in the same proportion as the school district enrollment contributes to the total enrollment of all participating districts.

Do Students Tell the Truth?

One question raised often about student surveys is whether students' responses are honest and accurate. Researchers use a variety of data analysis techniques to examine the likely accuracy of anonymous surveys and these were applied to the student survey as well. Surveys with numerous inconsistencies or improbable answers or with missing data on gender were excluded from data analysis; this totals about 3 percent of surveys from each MSS administration.

The majority of students exhibit patterns of responses to questions that are reasonable for a given question and consistent across similar questions. In addition, as results have demonstrated, percentages for many answers are consistent over time across the five MSS administrations studied for this report. Such similarities are likely to occur only if the survey responses reflect the actual situation for Minnesota's youth; it is extremely

unlikely that these patterns could be replicated by chance over time. Furthermore, the MSS findings are often consistent with findings in similar states and with national trend lines of increasing or decreasing behaviors.

This combination of individual response patterns, plausible relationships among answers, consistency over time within the state, and consistency with other research and with national studies all attest to the overall credibility of student responses.

Special Note about the 2004 Minnesota Student Survey Consent Procedures

The Minnesota Student Survey has been conducted using opt-out parental consent procedures where parents are notified in advance about the survey and the students are invited to participate unless parents choose not to have their children participate. In 2004, however, a small number of school districts required active written parental consent, meaning that students who did not have written permission from their parents were not allowed to take the survey. Student participation rates in most of these schools were much lower than normal, and there is a strong possibility that students receiving written parent permission may not have been representative of all students. However, the schools requiring written parent permission for the 2004 student survey contain only about 1 percent of the total student population. While local results may have been affected, statewide results were not affected.

Acknowledgments

We are indebted to all of the students who responded to the survey, as well as the school boards, administrators, Minnesota Student Survey coordinators and Safe and Drug Free Schools coordinators, and teachers who conducted the survey.

The Safe and Healthy Learners Team of the Minnesota Department of Education coordinated implementation of the 2004 Minnesota Student Survey. Also, the Performance Management and Quality Improvement staff of the Minnesota Department of Human Services and the Center for Health Statistics staff of the Minnesota Department of Health were integral to the full implementation of, analysis of and dissemination of the results of the Minnesota Student Survey, especially focusing on dataset management, data analyses and report production. The Office of Justice Programs staff at the Department of Public Safety and the Department of Corrections also provided constant support for the student survey process. Survey scanning services were provided by the wonderful folks at Survey and Ballot Systems, Inc.

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