

# Minnesota Student Survey 1992-2007 Trends



Behaviors, attitudes and perceptions of  
Minnesota's 6th, 9th and 12th graders

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

# In Appreciation

We are indebted to the teachers, Minnesota Student Survey coordinators and superintendents across the state who agreed to support the administration of the student survey in the spring of 2007. We especially thank the students who shared information on 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 youth 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 18 years provides educators, prevention program staff, 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 family structure.

The 2007 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 2007 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 positive or protective behaviors students engage in have continued to increase in prevalence since the last administration of the survey three years ago. In addition, many of the unhealthy or risky behaviors students engage in have continued to decrease 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 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.

When we examine other health behaviors, we find that reported seatbelt use also continued to increase. Reported levels of physical activity and consumption of fruits and vegetables increased for 9<sup>th</sup> and 12<sup>th</sup> graders, while remaining stable for the 6<sup>th</sup> graders. After years of a downward decline, the percentage of 12<sup>th</sup> graders who feel they are overweight also increased. This is particularly true for 9<sup>th</sup> and 12<sup>th</sup> grade girls.

In the area of alcohol, tobacco and other drugs, we witnessed mixed results. While cigarette smoking showed a continued strong downward trend for smoking cigarettes any drinking during the past year and binge drinking remained steady among 12<sup>th</sup> graders. In 2007, about three in ten 12<sup>th</sup> graders report binge drinking at least once in the past two weeks, and almost one-quarter of seniors report driving a motor vehicle after using alcohol or drugs.

While marijuana use among 6<sup>th</sup> and 9<sup>th</sup> graders decreased in 2007, its use among 12<sup>th</sup> grade students increased. The use of methamphetamine among 9<sup>th</sup> and 12<sup>th</sup> graders has also decreased by more than half of the previous rates to 1.5% and 2.2% respectively. However, there was a slight increase in the use of LSD and MDMA/Ecstasy among 12<sup>th</sup> graders in 2007; the use of these drugs by 9<sup>th</sup> grade students continued to decline. Fewer students reported being offered, sold or given illegal drugs on school property than in previous surveys.

There has been little change in the percentage of students reporting that they feel sad all or most of the time or feel discouraged or hopeless. Despite this, the percentage of students reporting that they have had suicidal thought or have tried to kill themselves in the past year has decreased dramatically. In fact, the percentage of 9<sup>th</sup> grade girls reporting a suicide attempt in the past year decreased by 50% from the 2004 rates.

Finally, there has been a decrease in the percentage of students in all three grades reporting that alcohol or drug use by family members has repeatedly

caused problems. This decrease is particularly striking for the 6<sup>th</sup> graders.

There is a slight increase this year in the percentage of 12<sup>th</sup> grade students reporting that they have ever had sex, and decreases in the percentage of both 9<sup>th</sup> and 12<sup>th</sup> graders reporting that they have talked with their partner(s) about STDs or HIV. However, sexually active students in both grades report increased use of condoms. Students reported continued high levels of caring by their parents, as well as slight increases in their ability to talk with their mother or father about problems.

### *Reflections from the data*

The following reflections from the data:

**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 will 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 major investments in prevention programming that are now showing results. 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 sustained. These groups must continue to promote the understanding and use of a common framework for 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 or slightly increasing levels of behaviors of concern.

**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 dynamic vehicle for on-going communication about issues vital to the health, safety and academic success of youth. It is a valuable tool for school districts, county agencies and state agencies in planning meaningful and effective ways of supporting students and families.

The survey asks students questions about their activities, opinions, behaviors and experiences. It includes questions on an array of issues - substance abuse (tobacco, alcohol and illegal drugs), school climate, violence and safety concerns, healthy eating, out-of-school activities, connections with school and family, and many other topics. At the senior high level, questions are also asked about gambling and sexual activity.

The survey is administered every three years to 6<sup>th</sup>, 9<sup>th</sup>, and 12<sup>th</sup> grade students in the regular public elementary and secondary schools, charter schools, and tribal schools. It is also offered to students from all grade levels in alternative learning centers and to youth in juvenile correctional facilities. The trends provided in this report focus on students in regular public schools, charter schools and tribal schools. Findings for the alternative learning centers and correctional facilities are reported separately.

The survey data set is used by many for both planning and evaluation. It has

been 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 assist schools and communities in efficient planning and implementation of education programs. School district leaders and educators, local public health agencies, and community and social services agencies use the results in planning and evaluation for school and community initiatives and prevention programming.

## *Survey Administration*

The 2007 Minnesota Student Survey is collaboration between Minnesota schools and four state agencies – the Minnesota Departments of Education, Health, Human Services and Public Safety. The four state agencies work together to implement, analyze, report and fund the initiative. Local schools, school districts and correctional facilities handled the administration of the survey.

Providing parents with the opportunity to view the survey and determine their child's participation has been the standard practice in administering the survey. Parents were informed about the survey in advance by each local school. The Minnesota Department of Education provided sample parental consent letters to school district coordinators in English, Spanish, Somali, Hmong, Cambodian, Laotian and Russian. Parents could choose not to have their children participate. 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, but the majority of school districts in Minnesota have chosen to participate. The school district participation rate was 99% in 1992, 92% in 1995, 92% in 1998, 91% in 2001, 88% in 2004, and 91% in 2007. Most districts had all three grades participate.

Aside from school decisions, student participation is also affected by illness, truancy, schedule conflicts, and parent or student refusal. Statewide, in 2007, 81% of all 6th grade students in regular public schools, 76% of 9th grade students and 58% of 12th grade students participated.

Statewide, participation increased from 89,000 in 1989 to more than 133,000 in each of the last four administrations. In 2007 more than 142,000 students took the survey across all education settings including over 136,000 in regular public schools. Approximately 3% of surveys are omitted from the final dataset because gender was missing or response patterns were frequently inconsistent or highly improbable.

### ***Standard Tables***

Standard tables showing the responses to each question on the survey have

been prepared and are available on several state agency Websites. There are separate statewide tables for regular public schools, alternative learning centers, and juvenile correctional facilities. Tables are also available for each county with two or more participating school districts. Each participating school district has received a set of tables showing results for their district.

The county, region and state tables are available at the following Websites:

[www.education.state.mn.us](http://www.education.state.mn.us)

[www.health.state.mn.us/divs/chs/mss/](http://www.health.state.mn.us/divs/chs/mss/)

[www.dhs.state.mn.us/id\\_007196](http://www.dhs.state.mn.us/id_007196)

[www.dps.state.mn.us/ojp](http://www.dps.state.mn.us/ojp)

### ***Trends Report***

This report focuses on several protective and risk factors that impact youth today. Since many of the same questions have been asked at each survey administration, comparisons can be made across time to determine whether the behaviors have increased or decreased in the middle and high school populations.

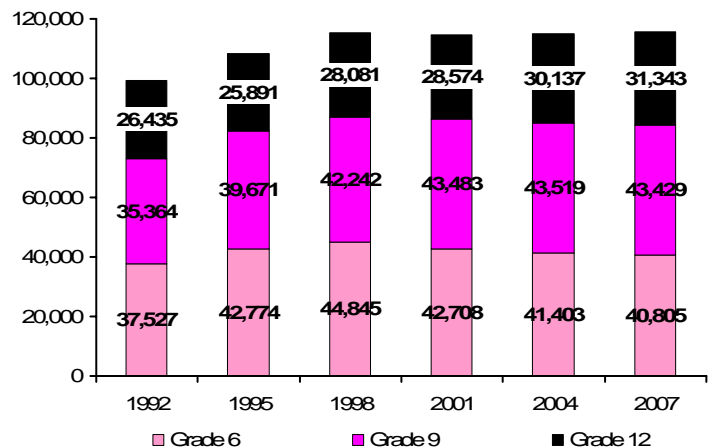
To compare state results across years, this trends report includes only those school districts that participated in each of the last six administrations of the survey – from 1992 to 2007. Selecting regularly participating school districts ensures that changes in reported student behaviors or attitudes are not due to variance in the set of school districts participating in the student survey. The school district sample for the 1992-2007 trend analysis represents 85% of all students surveyed during the last six administrations of the survey. The

table to the right shows the number of surveys included in the trend analysis from each survey year.

Note that this report reflects the needs and perspectives of students in regular public schools, charter schools and tribal schools. However, students who are enrolled in a wide range of alternative learning programs/centers designed to meet their unique learning, working and social needs and youth living in juvenile justice facilities are not included in the trends report. A separate report on the findings of students in non-traditional learning environments is also available.

The technical aspects of preparing the trend report and the validity of student responses are discussed in more detail in the Technical Notes section at the end of the report.

**Number of students contributing to trend file**



# Demographics

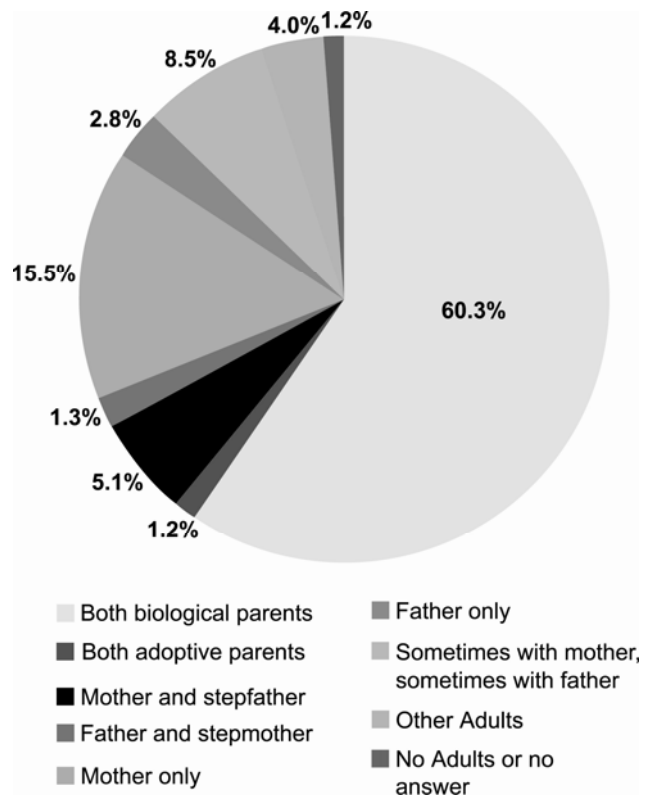
The analysis in this report is based on the great majority of public school students but excludes students from districts that have not consistently participated in the student survey. This section describes the students included in the trend data.

## *Family Structure*

In 2007, more than two-thirds of participating students lived in two-parent households, including 61.5% living with both biological parents or both adoptive parents and 6.8% with a parent and a stepparent. Another 8.5% divided their time, sometimes living with the mother and sometimes living with the father. More than one of every six students (18.3%) lived with only one parent.

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 gradually fell from 63.9% to 61.5%, and the percentage of students living sometimes with their mother and sometimes their father has increased from 4.9% to 8.5%.

**Which adults do you live with?**  
2007 trend data only



## ***Race and Ethnicity***

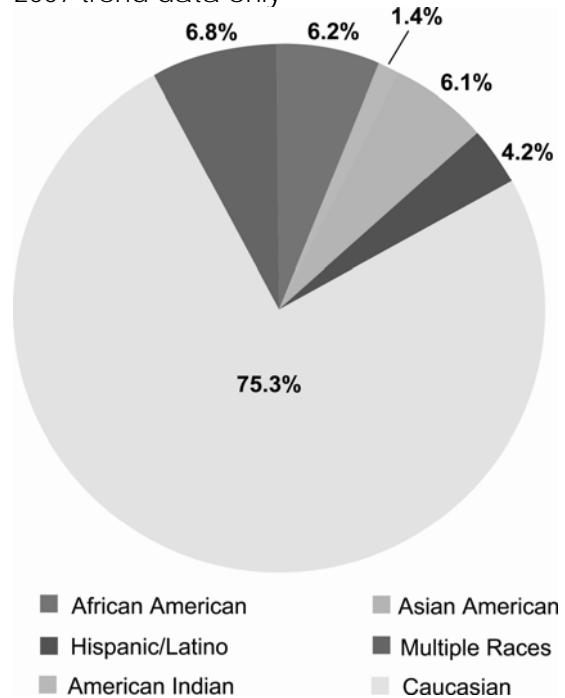
Since 1995, the Minnesota Student Survey has asked a question regarding race and ethnicity allowing students to mark more than one racial or ethnic identity. In the trend data, more than three-fourths of students taking the survey in 2007 (75.3%) marked White only, 6.1% marked Asian American only, 6.2% marked Black or African American only, 4.2% marked Hispanic only, and 1.4% marked American Indian only. Altogether, 6.8% 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 75.3% in 2007.

## ***Gender***

In each year, the group of students responding to the survey has been evenly divided between males and females. In 2007, 49.7% of the students were male and 50.3% were female.

**Race / ethnicity of survey respondents**  
2007 trend data only



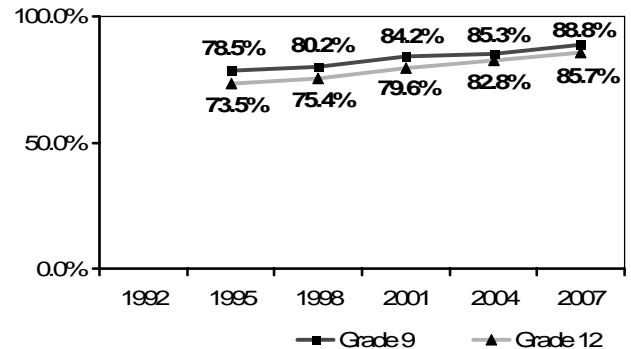
# Academics & School Connectedness

Over time, students' plans to go to college have been consistently high. Both 9<sup>th</sup> and 12<sup>th</sup> grade students have had a steady upward trend with over four-fifths of seniors now reporting their intentions to continue their education after high school.

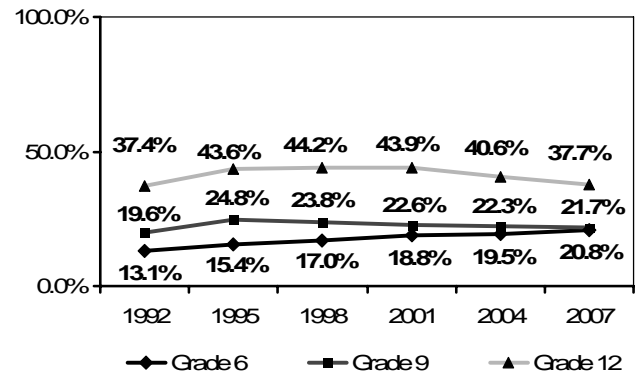
In 2007, one-fifth of 6<sup>th</sup> graders reported skipping school one or more days in the past 30 days, a measure that has gradually increased over time. More than 20% of ninth graders reported skipping in the past month, a rate that has held relatively steady over time. Slight less than two-fifths (37.7%) of 12<sup>th</sup> graders reported skipping school in the past 30 days. This rate, having held steady between 1995 and 2001, continued a decline started in 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 9<sup>th</sup> and 12<sup>th</sup> grade students working (including babysitting) 11 or more hours per week fell sharply from 2001 to 2004 and stabilized in 2007, although 45.4% of 12<sup>th</sup> graders still reported working for pay outside the home at least 11 hours per week.

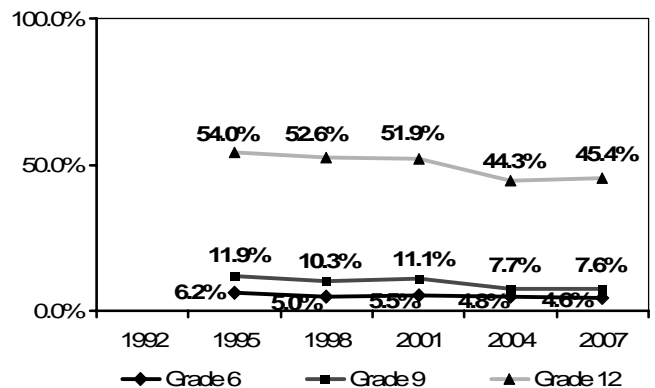
**Plans to go to college or beyond**



**Skipped school one or more of past 30 days**



**Worked for pay 11 or more hours per week**

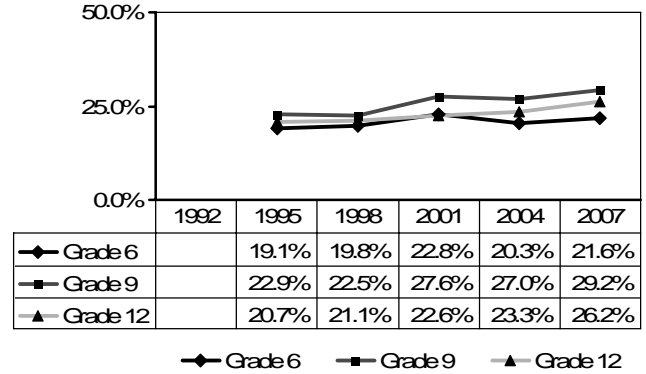


Involvement in school-related activities has a direct connection to academic achievement. Several measures have held steady over the past decade. Across grade levels, approximately one-fifth to three-tenths of students reported spending six or more hours on homework per week.

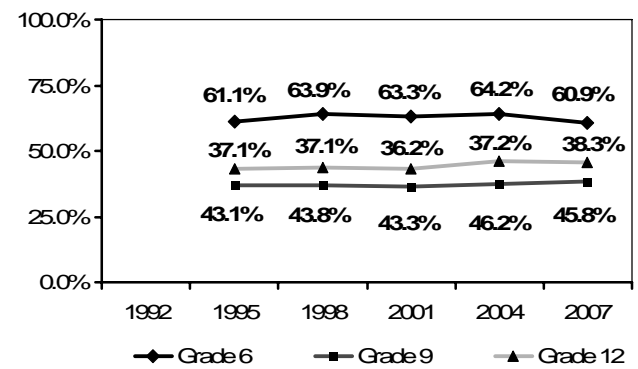
Feeling connected to educators is an important protective factor when it comes to school achievement. Student perceptions of whether teachers are interested in them as individuals have been relatively level over the years: nearly two-thirds of 6<sup>th</sup> graders, one-third of 9<sup>th</sup> graders and not quite one-half for 12<sup>th</sup> 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 6<sup>th</sup> grade students, this has been constant over the years at a rate over 80%. For 9<sup>th</sup> grade students, there has been a very gradual increase to 72.9% in 2007. Twelfth-graders, too, have had a gradual increase in their reported rate over time to 73.3%.

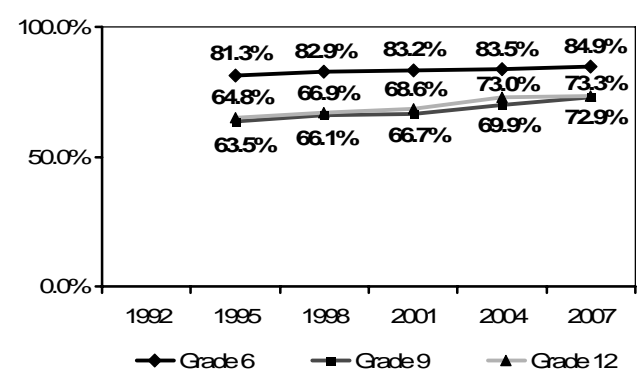
**Spend 6 or more hours per week on homework**



**All/most teachers interested in you as a person**



**All/most teachers show respect for students**



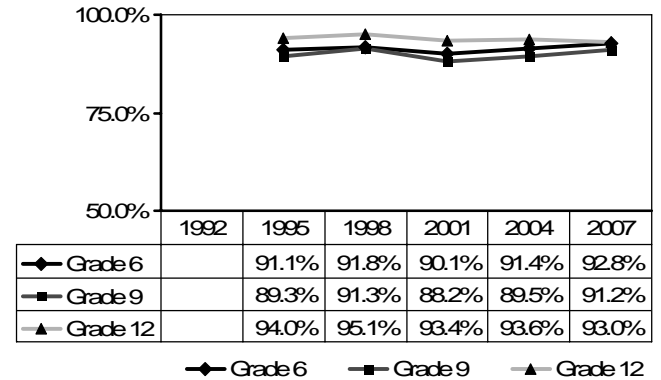
# Perceptions of School Safety

A high percentage of students in 6<sup>th</sup>, 9<sup>th</sup>, and 12<sup>th</sup> grades have consistently reported feeling safe at school. This trend has remained constant. On average, more than 90% of the students in each grade reported feeling safe at school in 2007.

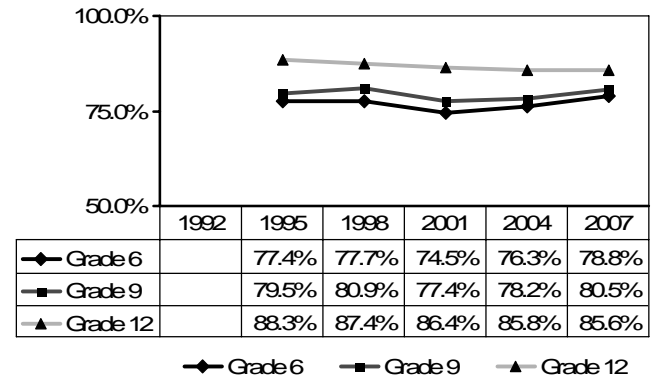
Despite the overall feelings of school safety, fewer students agreed that bathrooms are a safe place to be at school. Although the trends are somewhat consistent over time, slightly more than three-quarters of 6<sup>th</sup> graders feel that bathrooms are safe compared to over 90% feeling safe at school generally. Slightly fewer 12<sup>th</sup> graders in 2007 agreed with the statement that bathrooms in their school are a safe place to be compared to the 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 6<sup>th</sup> and 9<sup>th</sup> graders reported skipping school because of feeling unsafe than 12<sup>th</sup> graders. The 12<sup>th</sup> graders reported the second highest rate in 2007 since this question was first asked in 1995.

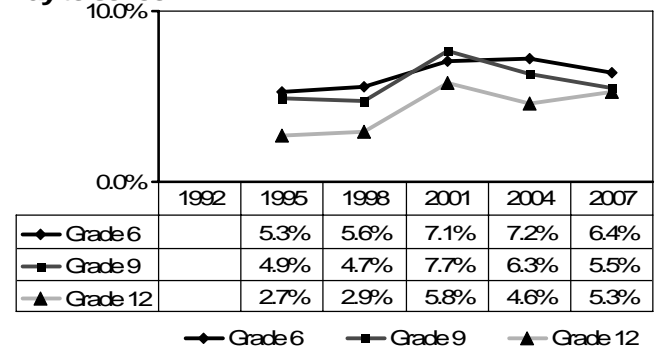
**Feel safe at school  
(strongly agree or agree)**



**Bathrooms in school area safe place to be  
(strongly agree or agree)**



**Skipped school one or more days in past  
30 days because felt unsafe at or on the  
way to school**

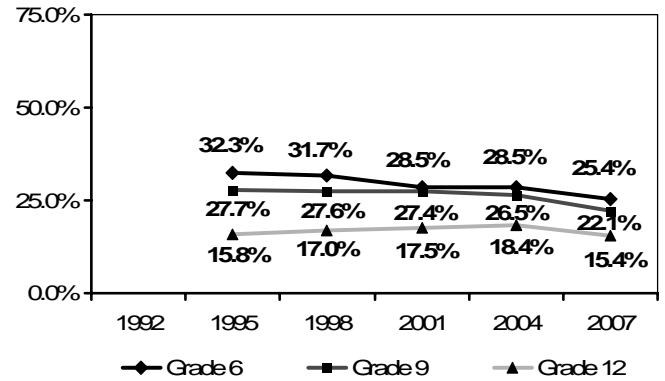


Reports that students had been threatened on school property have also remained fairly consistent over time. There has been a continued decrease in reports by both 6<sup>th</sup> and 9<sup>th</sup> graders. And, while reports by 12<sup>th</sup> graders increased from 1995 to 2004, in 2007 the reports decreased to lowest rate to date. About one-fourth of 6<sup>th</sup> and 9<sup>th</sup> graders and nearly one-sixth of 12<sup>th</sup> graders reported that a student threatened them on school property in the past year in 2007.

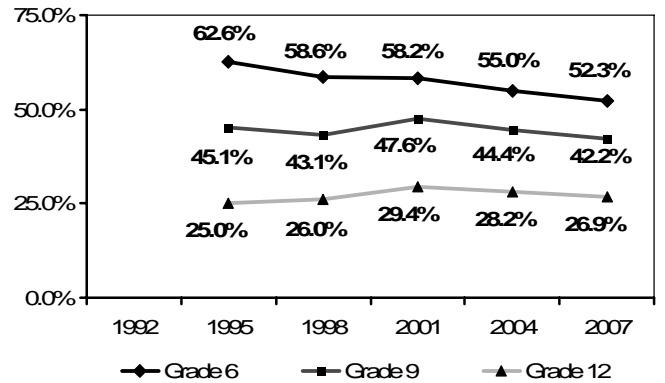
Since 1995, consistent percentages of students in 9<sup>th</sup> and 12<sup>th</sup> grade reported that a student pushed, shoved or grabbed them on school property in the past year. There has been a downward trend for 6<sup>th</sup> grade reports of these experiences, from 62.6% in 1995 to 52.3% in 2007. In 2007, over two-fifths of 9<sup>th</sup> graders and slightly more than one-quarter of 12<sup>th</sup> graders reported that a student pushed, shoved or grabbed them 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 had a significant decrease between 2004 and 2007. All students experienced a five to six percentage point drop from the previous reports. Slightly less than two-fifths of 6<sup>th</sup> graders, approximately one-third of 9<sup>th</sup> graders and just over one-quarter of 12<sup>th</sup> graders reported having their property stolen or damaged on school property.

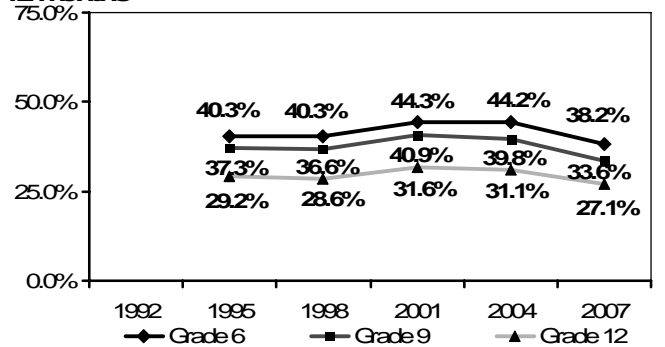
**A student threatened you on school property in past 12 months**



**A student pushed, shoved, or grabbed you on school property in the past 12 months**



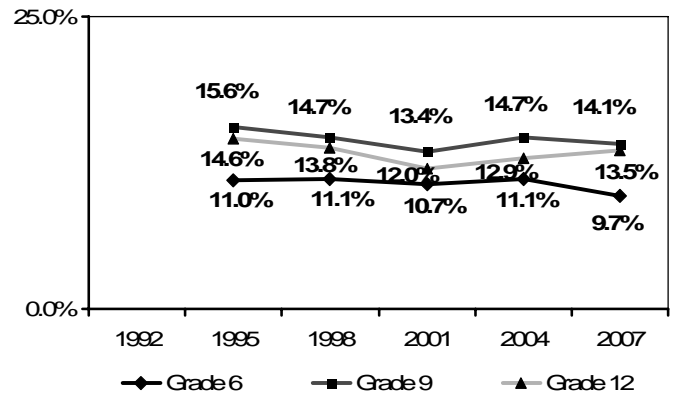
**Your property was stolen or damaged one or more times on school property in past 12 months**





The perception that students in their school have threatened or made fun of students of different races or backgrounds has remained consistent. About 14% of 9<sup>th</sup> graders reported that all or most students in their school have threatened or made fun of students of different races or background. Sixth grade students' reporting on this behavior remained relatively constant since 1995, but experienced a slight decrease to 9.7% in 2007.

**All/most students threatened/made fun of students of different races or backgrounds**

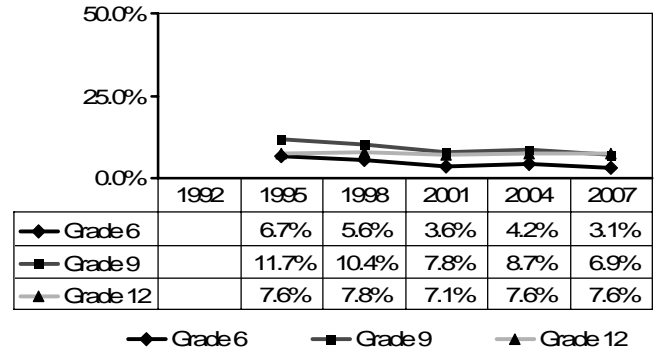


# Violent and Anti-Social Behavior

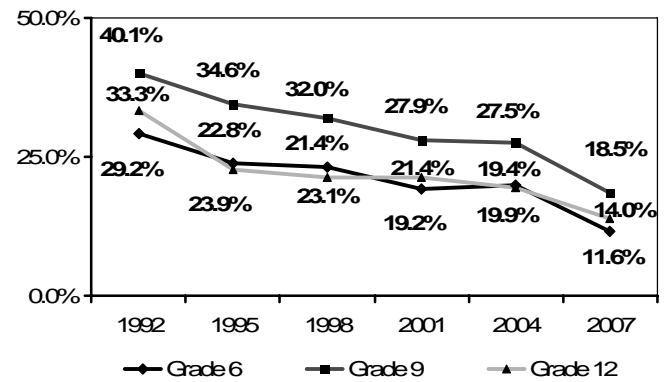
Smaller percentages of 6<sup>th</sup> graders and 9<sup>th</sup> graders reported that they carried a weapon (gun or other weapon) on school property in the past 30 days in 2007 than in the mid-2000s. The trend has shown little or no change for 12<sup>th</sup> graders over time. Overall, a higher percentage of 9<sup>th</sup> graders and 12<sup>th</sup> graders than 6<sup>th</sup> 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, with a more than 50% decrease across grades between 1992 and 2007. In 2007, about two in ten 9<sup>th</sup> graders and slightly more than one in ten 6<sup>th</sup> and 12<sup>th</sup> graders reported engaging in this behavior.

**Carried weapon (gun/other weapon) on school property one or more days in past 30 days**



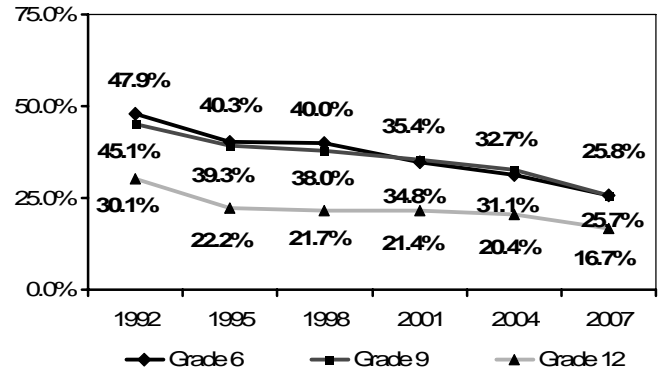
**Damaged or destroyed property one or more times in past year**



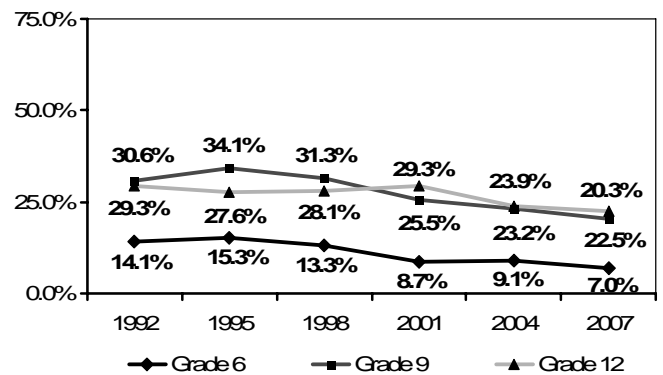
Similarly, the percentage of students reporting that they hit or beat up another person in the past year has decreased consistently over time, from less than one-half for 6<sup>th</sup> and 9<sup>th</sup> graders in 1992 to one-quarter of 6<sup>th</sup> and 9<sup>th</sup> graders in 2007. The percent of 12<sup>th</sup> graders reporting this behavior continues to decrease from a high of about 30% in 1992 to a low of 16.7% in 2007.

Over time, the percentage of students in each grade who reported that they had stolen something from a store in the past year has decreased. In 2007, about two in ten 9<sup>th</sup> and 12<sup>th</sup> graders reported stealing something from a store in the previous year. Only 7% of 6<sup>th</sup> graders reported engaging in this behavior in 2007.

**Hit or beat up another person one or more times in past year**



**Stole something from a store one or more times in past year**



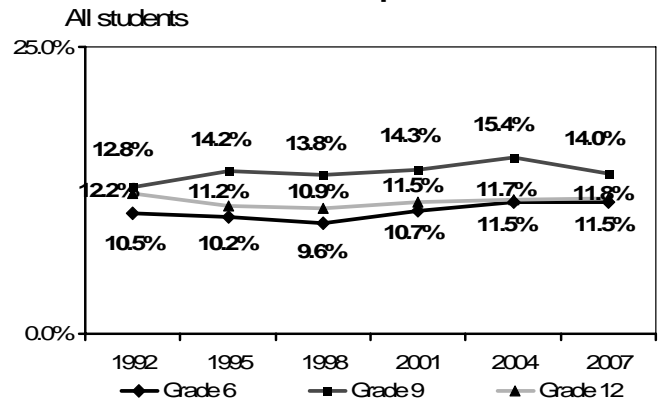
# Mental Health

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. In addition, negative experiences in school may also impact a student's mental health.

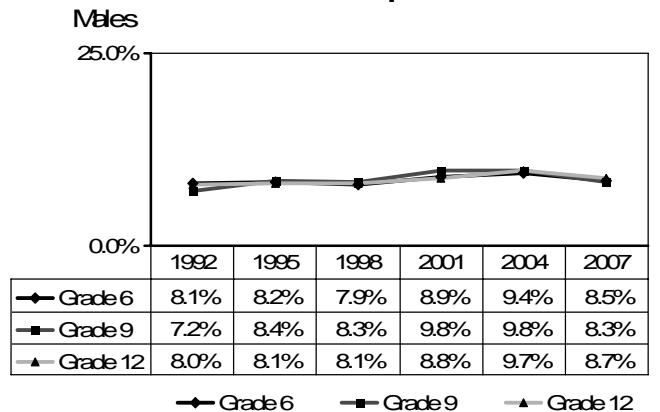
Feeling sad all or most of the time in the past month was reported by just over ten percent of 6th and 12th grade students in 2007; 9th graders reported a rate of 14.0%. When genders are combined, the rates are steady within each age group, varying about 2.5 percentage points. For males alone, the rates for each age group are very similar, just under nine percent in 2007.

Females, over time and at every grade level, report higher rates of frequent sadness than males. The 6th grade rate (14.5% in 2007) has been increasing since 1998. On this survey question and on subsequent measures of mental and emotional well-being, 9th grade females present a more vulnerable picture. Regarding persistent sadness, they have reported varying rates over time, the highest reported in 2004 at 20.6%. This rate is double that of males the same age.

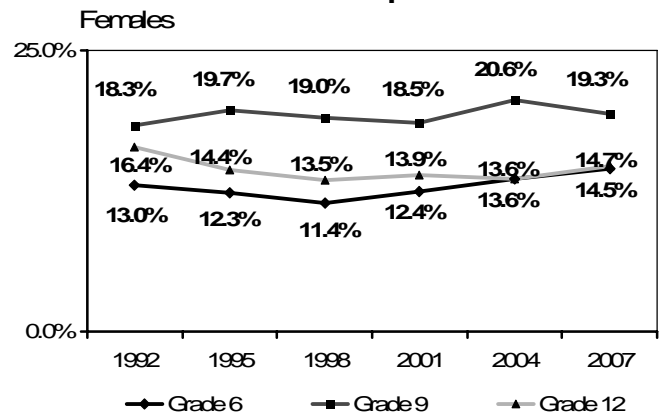
**Felt sad all or most of the time in past month**



**Felt sad all or most of the time in past month**



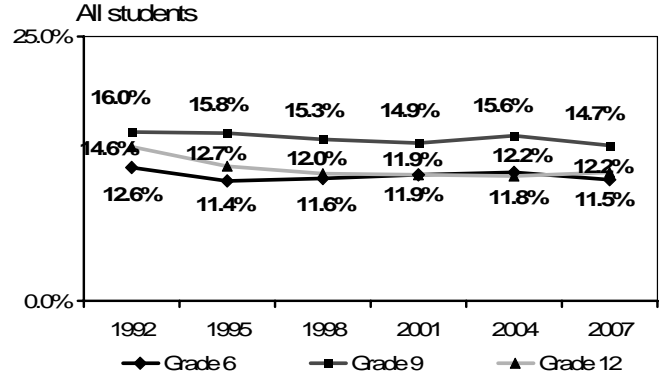
**Felt sad all or most of the time in past month**



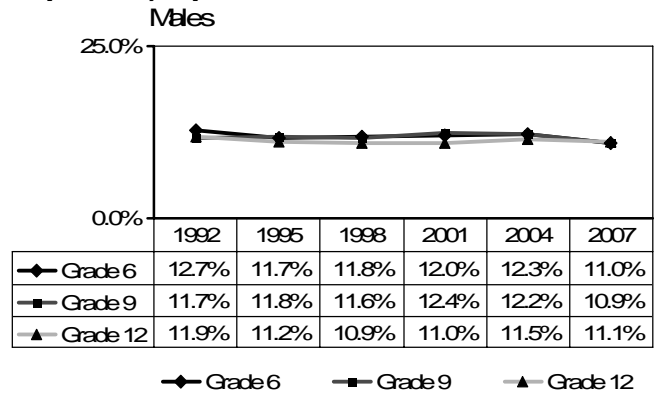
Ninth graders' responses to feeling discouraged or hopeless in the past month were approximately three percentage points higher than the other two grades in the most recent years. The rates for 6<sup>th</sup> and 9<sup>th</sup> graders has had little or no change between 2004 and 2007, while the 12<sup>th</sup> grade rates have remained consistent since 1995.

Males had rates very similar for all grade levels and across time, at just over ten percent. Females showed dramatic differences, with rates for 6<sup>th</sup> grade females steady and at rates similar to 6<sup>th</sup> grade males. Twelfth grade girls saw a decrease in feelings of hopelessness by five percentage points from 1992 to 2004, down to the same rate as their male counterparts. However, the difference between 12<sup>th</sup> grade males and females in 2007 has grown larger (11.1% and 13.2% respectively). Ninth grade females reported a rate almost double that of their male counterparts and also well above the rates for 6<sup>th</sup> or 12<sup>th</sup> grade females.

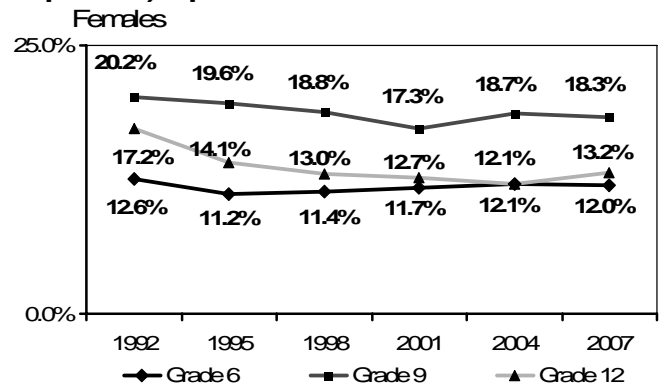
**Felt discouraged or hopeless (extremely so or quite a bit) in past month**



**Felt discouraged or hopeless (extremely so or quite a bit) in past month**

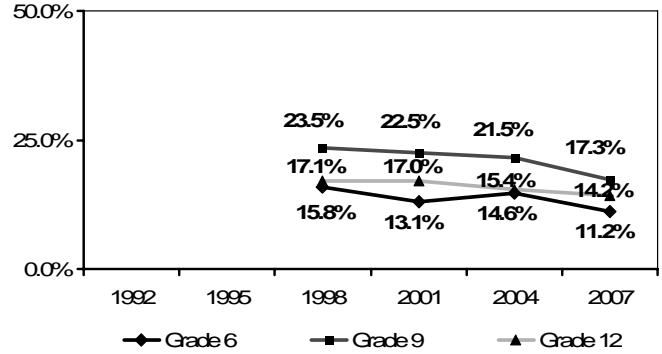


**Felt discouraged or hopeless (extremely so or quite a bit) in past month**

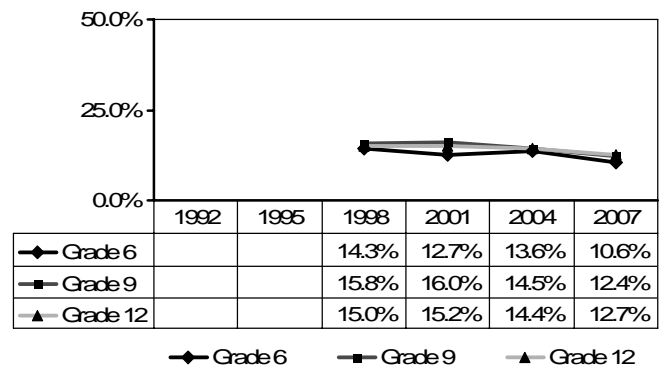


The percentage of youth reporting suicidal thoughts between 2004 and 2007 decreased for all ages and for both males and females. Despite this decline, 9<sup>th</sup> grade girls continued to report the highest rates of suicidal ideation (21.9%) followed by 12<sup>th</sup> grade girls (15.5%) and 12<sup>th</sup> grade boys (12.7%).

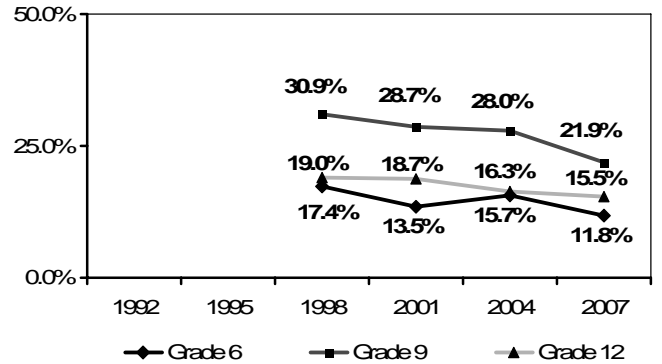
**Had suicidal thoughts in the past year**  
All students



**Had suicidal thoughts in the past year**  
Males

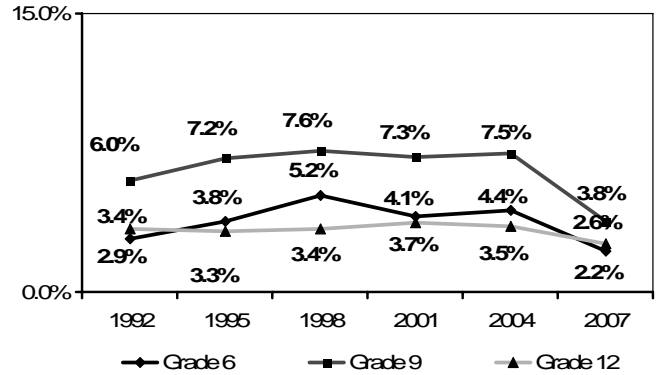


**Had suicidal thoughts in the past year**  
Females

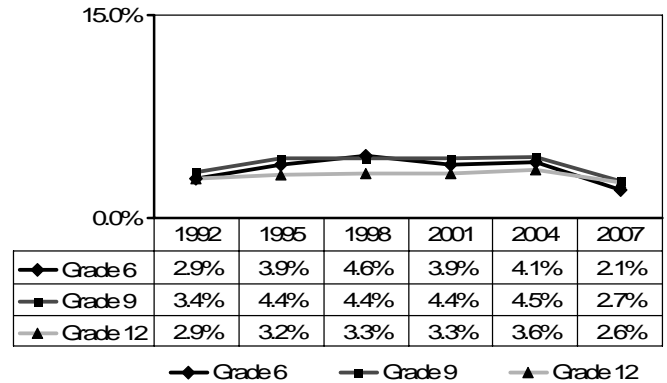


A smaller percentage of young people attempted suicide than experienced suicidal ideation. Like suicidal ideation, the suicide attempt rates between 2004 and 2007 have decreased for all ages and both males and females. The 9<sup>th</sup> grade girls continue to have the highest rates of attempted suicide, but also had the most significant change, dropping from 10.3% in 2004 to 4.9% in 2007. About two percent of 6<sup>th</sup> and 9<sup>th</sup> grade males and females reported suicide attempts which represents decreases between one and two percentage points from 2004.

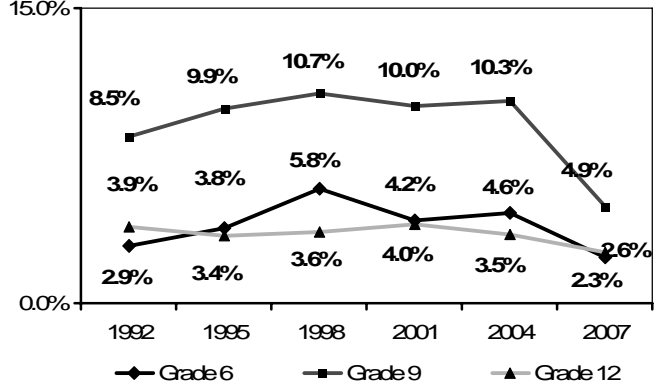
**Tried to kill yourself in the past year**  
All students



**Tried to kill yourself in the past year**  
Males



**Tried to kill yourself in the past year**  
Females



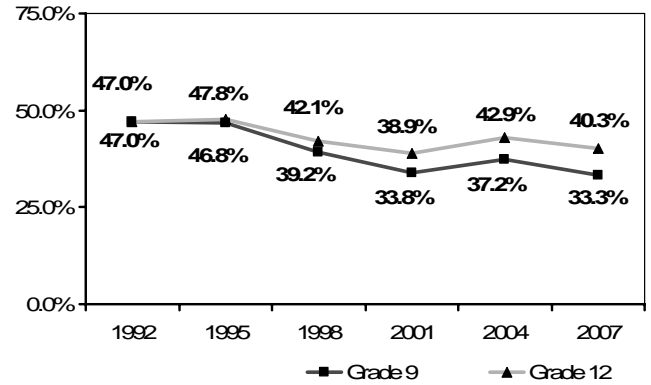
# Gambling

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 only to decrease again in 2007. Boys reported significantly higher rates of card-playing for money than did girls.

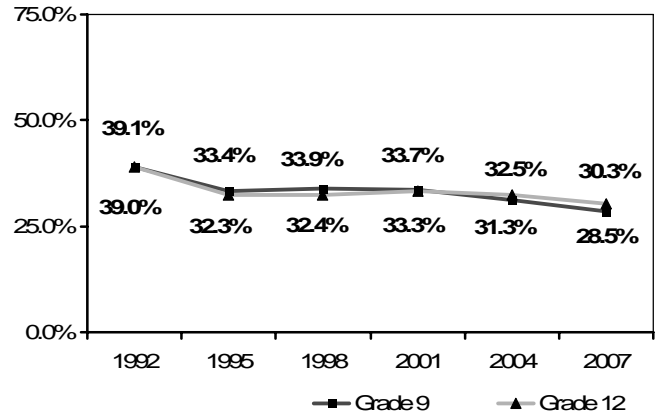
The percentage of 9th and 12th graders betting money on games of skill has also declined since 2001. Despite the overall decline, boys continued to report this gambling behavior at a rate three times higher than girls

Until 2007, betting on sports games in the past year has been reported by more 9th graders than 12th graders. However, the rates are almost identical in 2007. Both grade levels show a dramatic decline over time with 9th grade rates declining by half – from 45.6% in 1992 to 22.6% in 2007. Twelfth grade rates dropped 41% from a high of 38.7% in 1992 to a low of 22.7% in 2007.

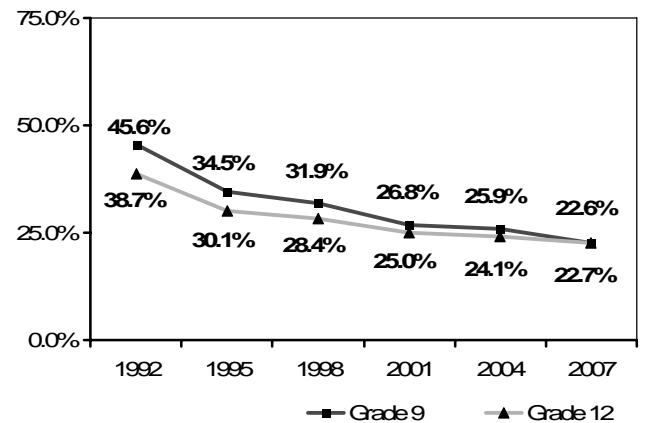
**Played cards for money in the past year**



**Bet money on games of skill in the past year**



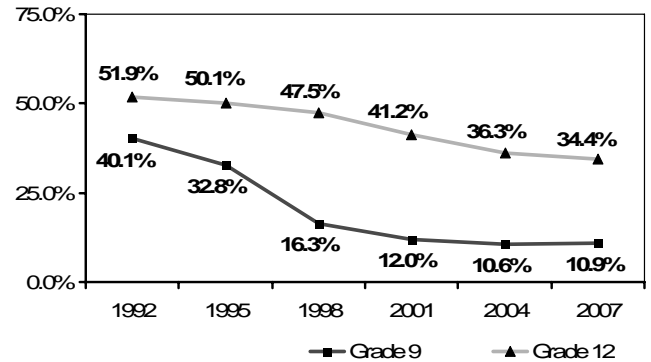
**Bet money on sports teams in the past year**





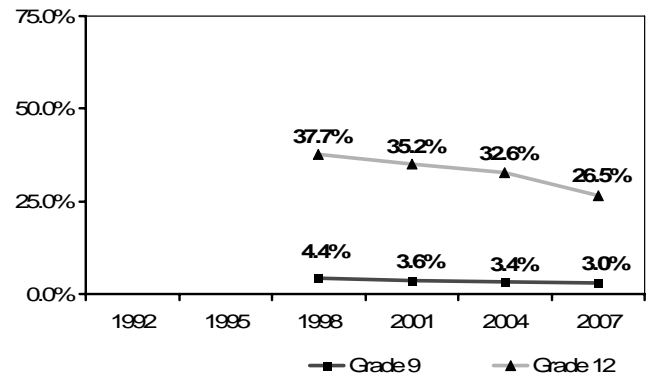
Overall, students who reported buying lottery tickets and scratch-offs declined to a large extent from 1992 to 2007. This behavior is more prevalent among 12th graders than 9th graders. Students in 12th grade demonstrated a decline over time from 51.9% in 1992 to 34.4% in 2007. While about 40% of 9th graders reported this type of behavior in 1992, the rate dramatically decreased to 10.9% in 2007.

**Bought lottery tickets or scratch-offs in the past year**



Beginning with the 1998 Student Survey, 9<sup>th</sup> and 12<sup>th</sup> graders have been asked to report their rates of gambling in casinos during the past year. Both 9<sup>th</sup> and 12<sup>th</sup> graders have shown steady declines since 1998, with 12<sup>th</sup> graders reporting a 30% decrease from a high of 37.7% in 1998 to a low of 26.5% in 2007. Students in 12<sup>th</sup> grade reported higher rates of gambling in a casino than did 9<sup>th</sup> graders, while males reported this behavior more often than females.

**Gambled in a casino in the past year**



# Alcohol, Tobacco & Other Drugs

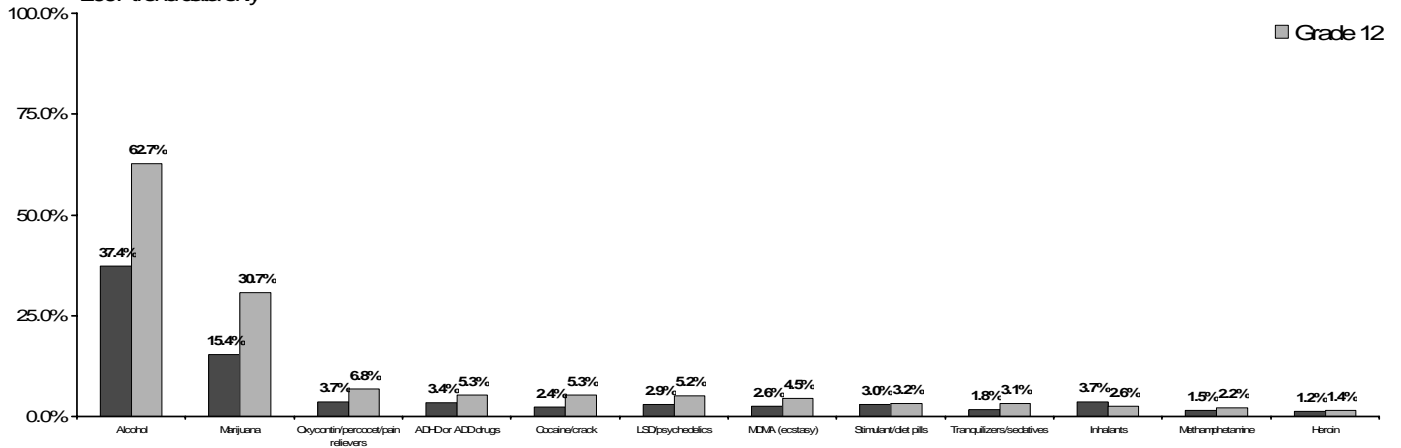
## Across Substances

The prevalence of use was compared across substances based on students' report of use during the last 12 months. Due to changes in the survey, tobacco use during the last 12 months was not asked in 2007, so the comparison across substances includes only alcohol and illicit drugs.

Alcohol was used by a larger percentage of youth (37.4% of 9<sup>th</sup>

graders and 62.7% of 12<sup>th</sup> graders) than any other substances in 2007. Marijuana was the second most used substance with 15.4% of 9<sup>th</sup> graders and 30.7% of 12<sup>th</sup> graders reporting its use. Various prescription drugs (pain relievers, such as OxyContin and Vicodin, and ADHD drugs, such as Ritalin) were reported as the next most used substances by both 9<sup>th</sup> and 12<sup>th</sup> graders. Inhalants were more popular among 9<sup>th</sup> graders than 12<sup>th</sup> graders while crack/cocaine had a higher ranking among 12<sup>th</sup> graders.

Percent of students using chemical substances one or more times in the past year  
2007 trend data only



## Alcohol use

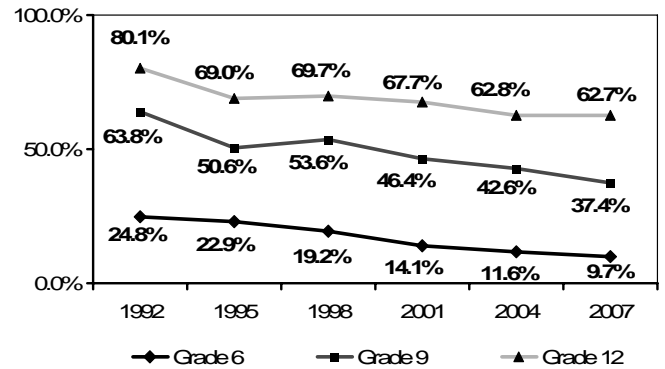
### *Any drinking*

The percentage of students who reported having alcoholic beverages at least once in the past year shows an overall downward trend since 1992, with a slight increase for 9<sup>th</sup> and 12<sup>th</sup> graders in 1998. The decline is most steady among the 6<sup>th</sup> graders who showed a consistent downward trend from 24.8% in 1992 to 9.7% in 2007. On the other hand, the majority of 12<sup>th</sup> graders (62.7%) still reported alcohol use in 2007, which is about the same level reported in 2004.

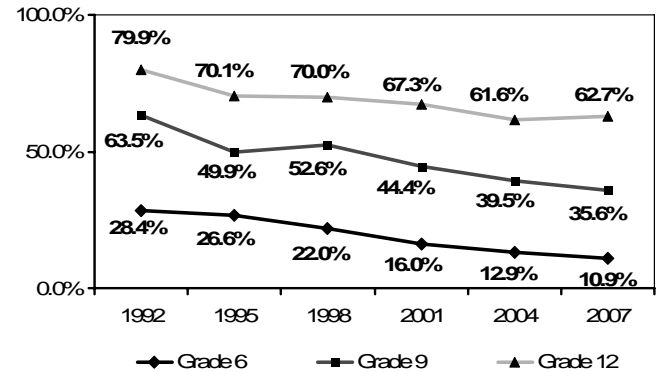
Among 6<sup>th</sup> graders, consistently more male students than female students reported alcohol use across years. Alcohol use among 9<sup>th</sup> graders decreased more among males than females. In 1992, alcohol use among 9<sup>th</sup> grade females was similar to the use among males (63.5% and 64.0% respectively), but the gender gap increased over the years and again, in 2007, 39.1% of female students in 9<sup>th</sup> grade reported drinking in the past year while 35.6% of their male counterparts reported drinking in the past year.

Alcohol use among 12<sup>th</sup> graders has fluctuated over the years for both genders. In 2004, both male and female 12<sup>th</sup> graders showed the largest decline to date (5.7 and 4.2 percentage-point declines respectively), but in 2007, drinking among 12<sup>th</sup> grade males increased slightly.

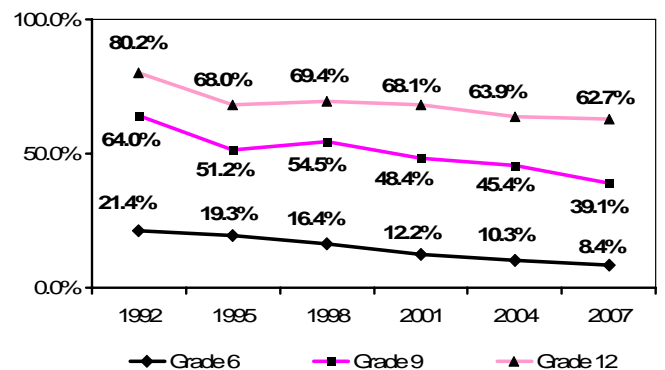
**Used alcohol one or more times in past year**  
All students



**Used alcohol one or more times in past year**  
Males



**Used alcohol one or more times in past year**  
Females

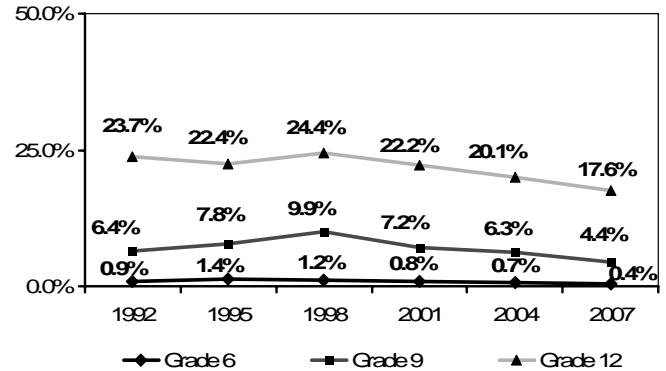


## Frequent drinking

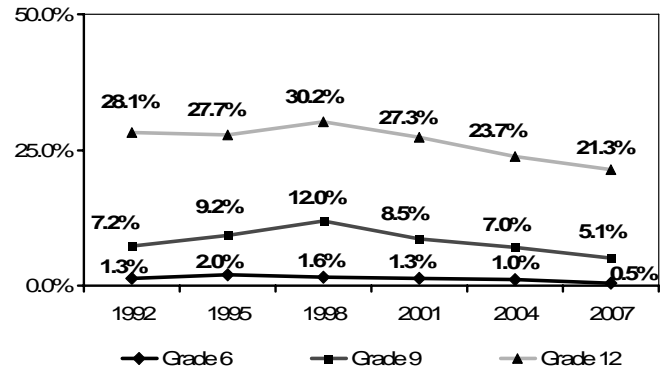
The prevalence of frequent drinking (drinking on 20 or more occasions during the past 12 months) among 9<sup>th</sup> and 12<sup>th</sup> graders peaked in 1998 with 9.9% of 9<sup>th</sup> graders and 24.4% of 12<sup>th</sup> graders reporting it, then the rates steadily decreased in both grades. All three grades experienced the lowest rates in 2007 with 0.4% of 6<sup>th</sup> graders, 4.4% of 9<sup>th</sup> grader and 17.6% of 12<sup>th</sup> graders reporting frequent drinking.

Frequent drinking was more prevalent among males than females across all grades and years. The overall trend, however, was similar across genders in each grade. Among 9<sup>th</sup> graders, frequent drinking had gradually increased until 1998, and then it started decreasing for both genders, with 5.1% of male students and 3.7% of female students reporting it. Among 12<sup>th</sup> graders, the rate of frequent drinking had fluctuated through 1998, and then it decreased over the years for both genders. In 2007, more than one in five male students and about one in seven female students in 12<sup>th</sup> grade reported drinking alcoholic beverages on 20 or more occasions during the past 12 months.

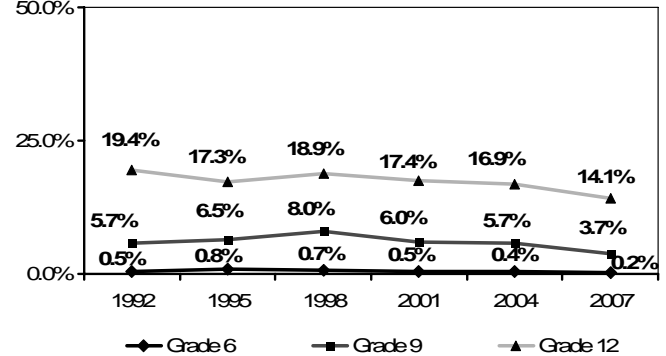
**Used alcohol 20 or more times in past year**  
All students



**Used alcohol 20 or more times in past year**  
Males



**Used alcohol 20 or more times in the past year**  
Females



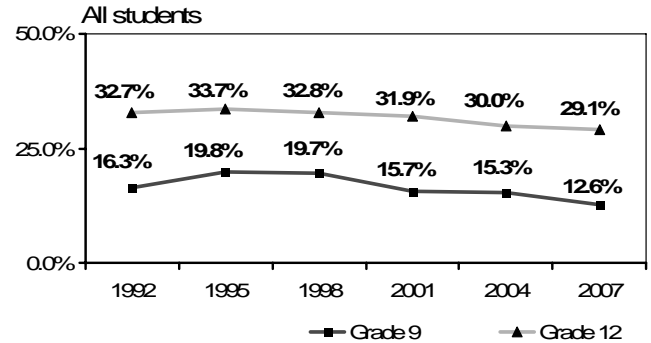
## Binge drinking

Binge drinking (five or more drinks in a row in the past two weeks) was reported by 12.6% of 9<sup>th</sup> graders in 2007, a 2.7 percentage-point decrease from 2004. This was the second substantial decrease after a 4 percentage-point drop from 19.7% in 1998 to 15.7% in 2001. Binge drinking rates among 12<sup>th</sup> graders showed slight but steady decrease over the years from a high of 33.7% in 1995 to 29.1% in 2007. Sixth graders were not asked this question.

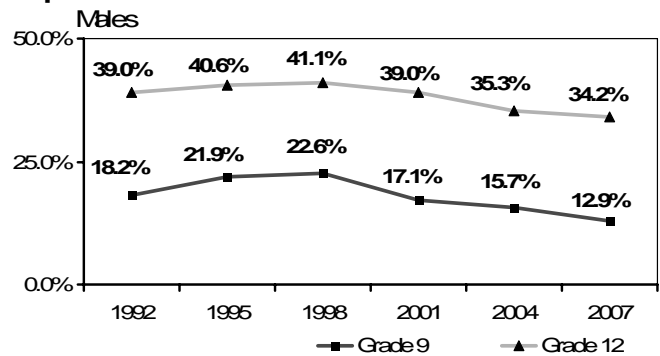
For both 9<sup>th</sup> and 12<sup>th</sup> graders, binge drinking was more prevalent among male students than female students across the years. Ninth-grade male students showed a steady downward trend since 1998 with an overall 9.7 percentage-point drop in rates over the years. Twelfth-grade male students also showed a steady, but much slower, downward trend since 1998.

The steady downward trend is yet to be seen for female students. After a slight increase in 2004, 9<sup>th</sup> grade female students had a 2.4 percentage-point drop in 2007. However, binge drinking rates among 12<sup>th</sup> grade female students remained steady at around 25% since 1998.

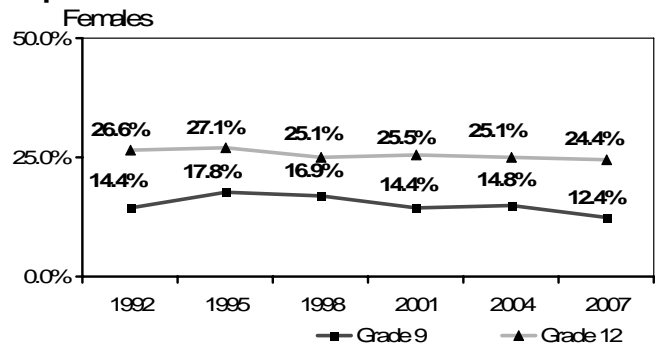
**Binge drinking (five or more times in a row) in the past two weeks**



**Binge drinking (five or more times in a row) in the past two weeks**



**Binge drinking (five or more times in a row) in the past two weeks**



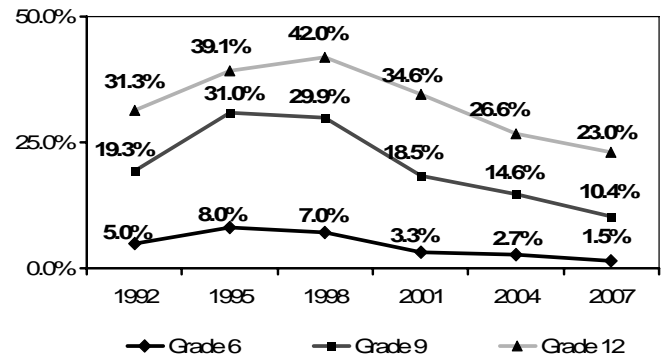
## Tobacco use

### Recent Use

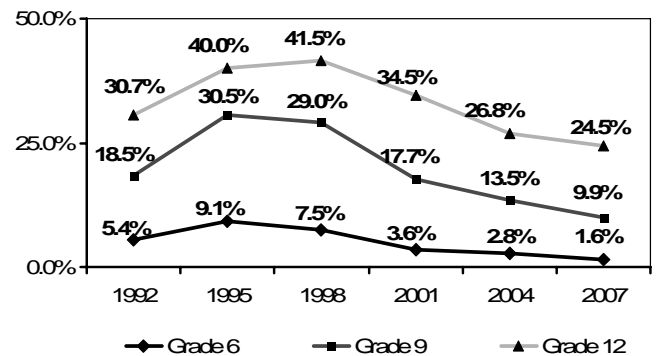
The percentage of Minnesota students smoking any cigarettes during the past 30 days continued a downward trend. After increasing in the 1990s, the smoking rate among 12<sup>th</sup> graders dropped from 42.0% in 1998 to 23.0% in 2007. The 6<sup>th</sup> and 9<sup>th</sup> grade smoking rates declined slightly between 1995 and 1998, and then the rates started declining precipitously; they were cut by more than three quarters among 6<sup>th</sup> graders (from 7.0% in 1998 to 1.5% in 2007) and by about two thirds among 9<sup>th</sup> graders (from 29.9% in 1998 to 10.4% in 2007). Twelfth-graders also showed a decline from 42.0% in 1998 to 23.0% in 2007. Although more than one in five 12<sup>th</sup> graders still reported smoking cigarettes in the past month, these are the lowest rates reported in the history of the Minnesota Student Survey.

Overall, both males and females show declining trends of cigarette smoking across the years. Sixth-grade males were more likely than females to smoke cigarettes during the past 30 days. The reverse was true among 9<sup>th</sup> graders: more females than males smoked in the past 30 days. These differences are slight but consistent throughout the years. In 2007, 12<sup>th</sup> grade female students had a larger rate decrease (4.9 percentage points) than their male counterparts (2.3 percentage points).

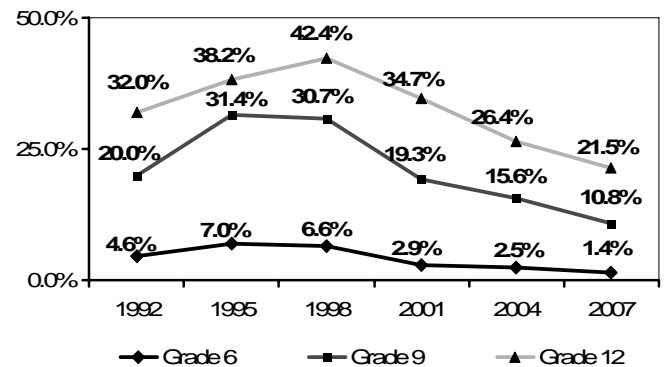
**Smoked cigarettes during previous 30 days**  
All students



**Smoked cigarettes during previous 30 days**  
Males



**Smoked cigarettes during previous 30 days**  
Females

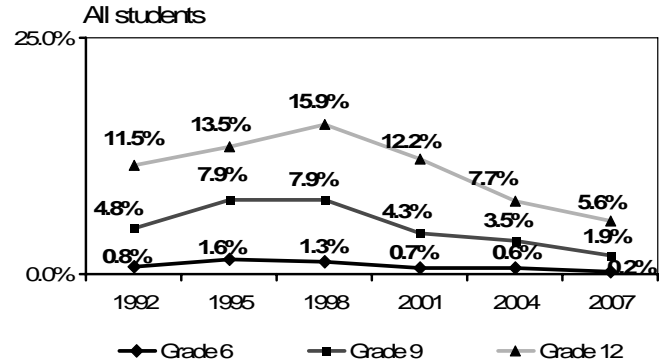


## Heavy Use

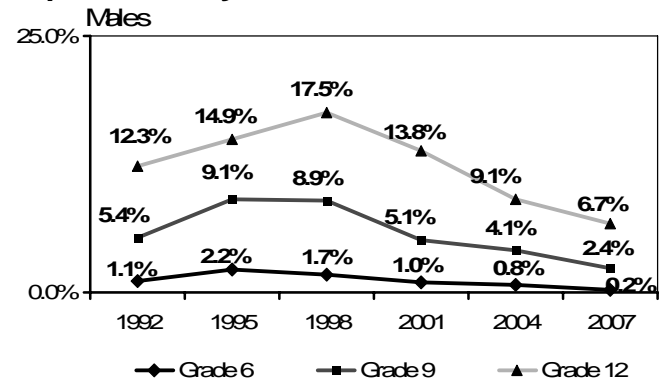
Heavy cigarette smoking (half a pack or more per day) also declined among Minnesota students. After increasing in the early 1990s, heavy cigarette smoking decreased steadily and reached the lowest rates across all grades in 2007: 0.2% of 6<sup>th</sup> graders, 1.9% of 9<sup>th</sup> graders and 5.6% of 12<sup>th</sup> graders reported smoking half a pack of more per day.

These decreasing patterns are quite similar for males and females. Overall, female students showed lower rates of heavy smoking than male students across all grades and years. Among male students, 6.7% of 12<sup>th</sup> graders, 2.4% of 9<sup>th</sup> graders, and 0.2% of 6<sup>th</sup> graders reported heavy smoking in 2007. Among female students, the comparable rates were 4.6%, 1.4% and 0.2% respectively.

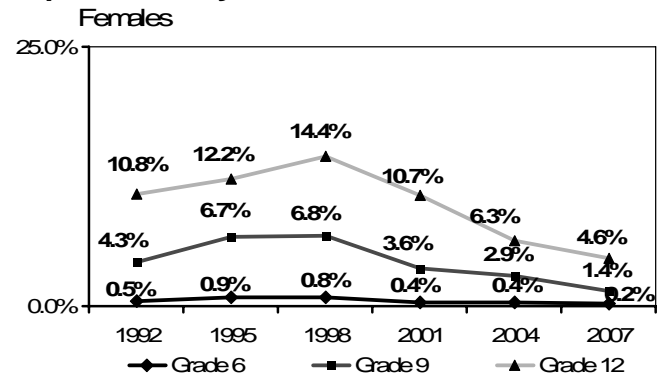
**Smoked half pack or more per day during the previous 30 days**



**Smoked half pack or more per day during the previous 30 days**



**Smoked half pack or more per day during the previous 30 days**

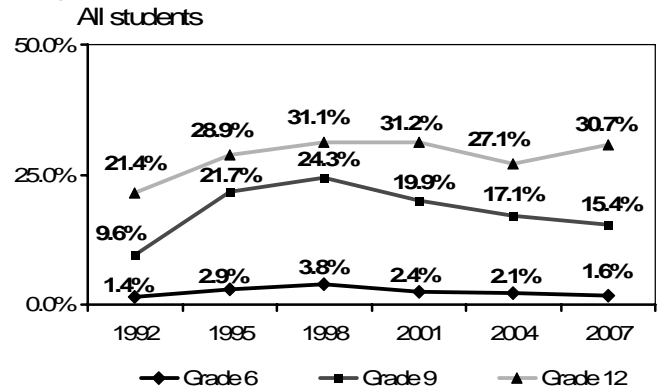


## Marijuana use

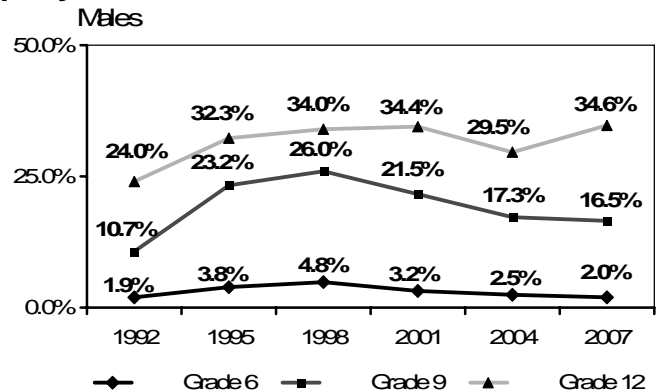
Past year marijuana use among 6<sup>th</sup> and 9<sup>th</sup> graders showed some declining patterns after the peak use reported in 1998. Even with the decreases in use since 1998, however, there is still a higher percentage of students reported using marijuana in 2007 compared to 1992. While marijuana use among 6<sup>th</sup> and 9<sup>th</sup> graders decreased, 12<sup>th</sup> graders showed an increase in use in 2007 (from 27.1% in 2004 to 30.7% in 2007).

Marijuana use is more prevalent among male students than female students in all grades and years. In 6<sup>th</sup> and 9<sup>th</sup> grades, both male and female students showed a steady declining trend since 1998. Both male and female students in 12<sup>th</sup> grade, however, showed some increase in use in 2007 (5.1 percentage points among males and 2.1 percentage points among females).

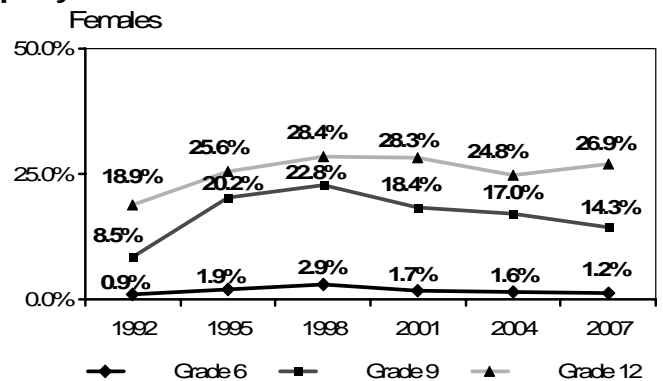
**Used marijuana one or more times in the past year**



**Used marijuana one or more times in the past year**



**Used marijuana one or more times in the past year**





## Other Drugs

### *Inhalants*

Unlike other substances, inhalants are used more by younger students than 12<sup>th</sup> graders. Among 6<sup>th</sup> graders, for example, inhalant use has been more prevalent than marijuana use. Despite the popularity of inhalants among younger students, 6<sup>th</sup> and 9<sup>th</sup> grade showed larger rate decreases over time, making the differences between the grades less significant. With an overall decline in use across the years, each grade showed the lowest rate in 2007 (2.8% of 6<sup>th</sup> graders, 3.7% of 9<sup>th</sup> graders and 2.6% of 12<sup>th</sup> graders).

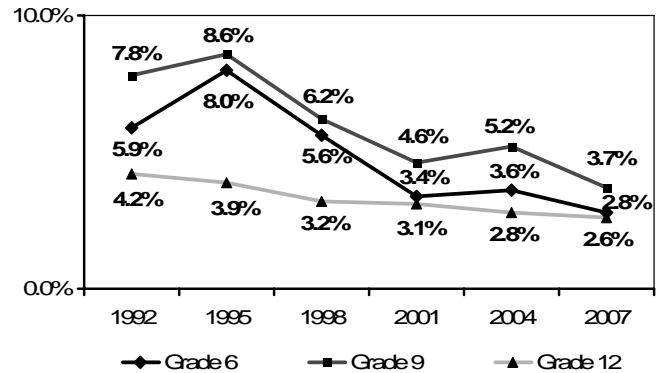
### *LSD/psychedelics*

Use of LSD/other psychedelics had increased in the 1990s, and then decreased in 2001 and 2004 for both 9<sup>th</sup> and 12<sup>th</sup> graders. In 2007, however, the use among 12<sup>th</sup> graders increased while it slightly decreased among 9<sup>th</sup> graders.

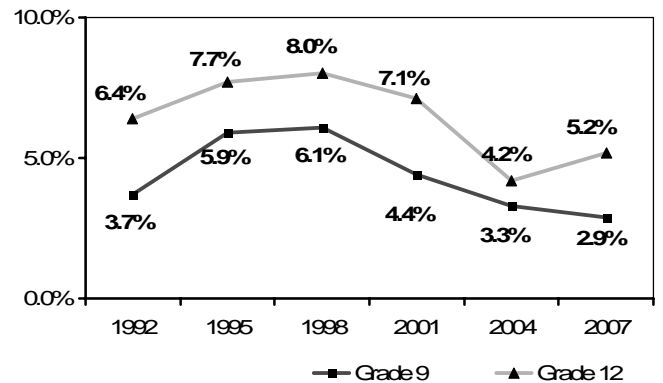
### *MDMA/ecstasy*

Use of MDMA/ecstasy by 9<sup>th</sup> graders has decreased since 2001, when MSS first asked about such use. Among 12<sup>th</sup> graders, however, the use increased slightly in 2007 after a big decline shown in 2004.

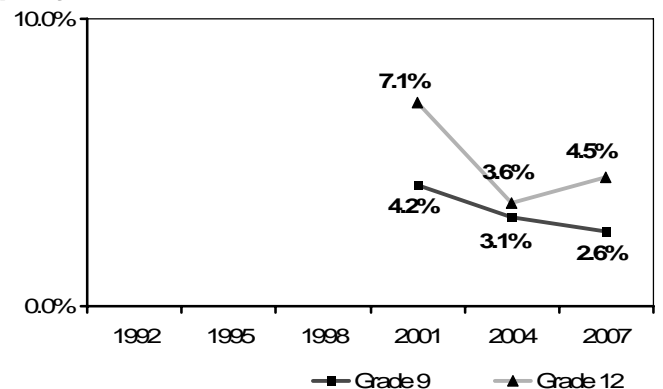
**Used inhalants one or more times in the past year**



**Used LSD or other psychedelics one or more times in past year**



**Used MDMA/ecstasy one or more times in past year**



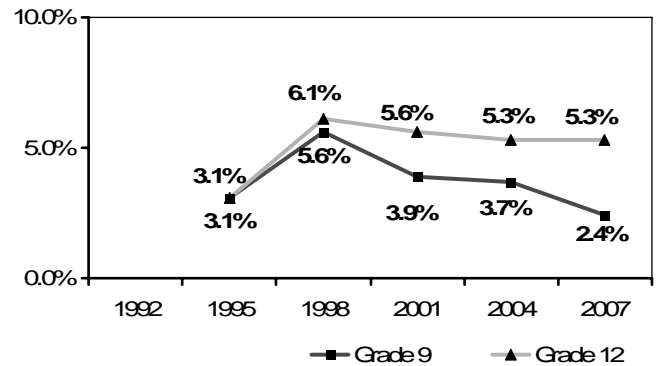
### *Crack/cocaine*

Crack/cocaine use was first surveyed beginning in 1995. After its peak in use reported by both 9<sup>th</sup> and 12<sup>th</sup> graders in 1998, the rates have decreased gradually among 9<sup>th</sup> graders with 2.4% reporting its use in 2007. However, the use of crack/cocaine among 12<sup>th</sup> graders has remained consistent at 5.3% since 2004.

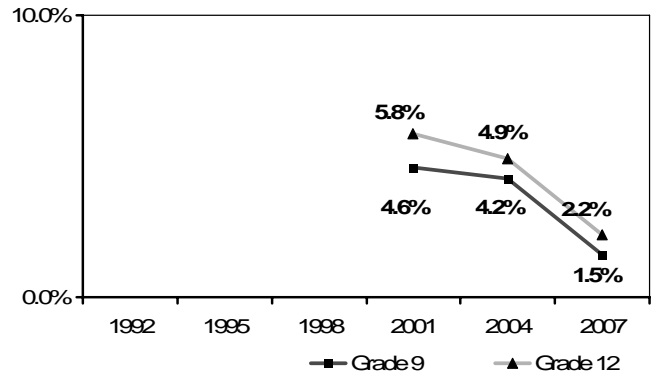
### *Methamphetamines*

Methamphetamine use has been declining since it was first asked about in 2001. In 2007, 1.5% of 9<sup>th</sup> graders and 2.2% of 12<sup>th</sup> graders reported using methamphetamines. These rates are less than half of those shown in 2004.

**Used crack or cocaine one or more times in the past year**



**Used methamphetamine one or more times in past year**



## Substance Use and School

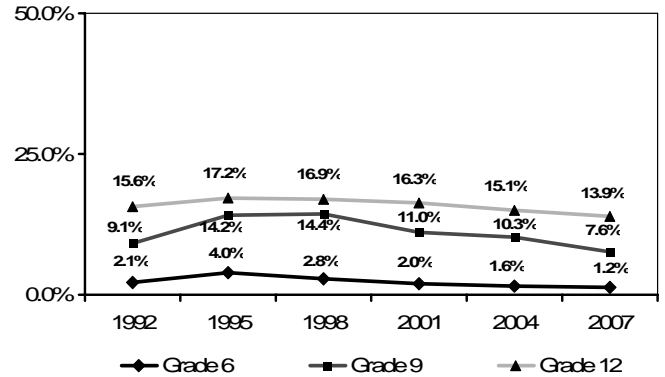
### *Before and/or during school*

Substance use is a serious health risk issue among adolescents. Using 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 started a downward trend with all grades having the lowest rates in 2007 (1.2% of 6<sup>th</sup> graders, 7.6% of 9<sup>th</sup> graders and 13.9% of 12<sup>th</sup> graders).

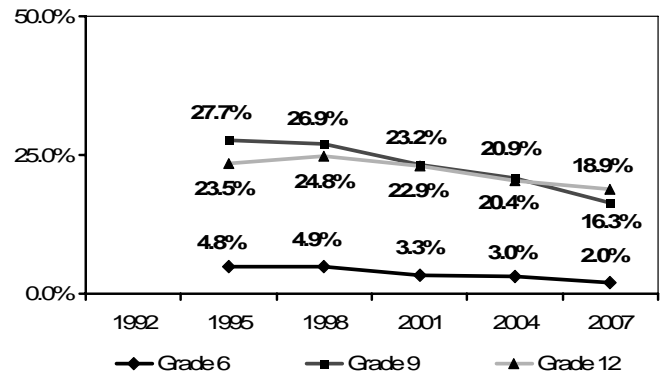
### *Opportunities to obtain drugs at school*

In 2007, 18.9% of 12<sup>th</sup> graders, 16.3% of 9<sup>th</sup> graders, and 2.0% of 6<sup>th</sup> graders reported being offered, sold or given an illegal drug on school property during the last 12 months. All grades have had a downward trend over time. The decrease was slightly greater among 9<sup>th</sup> graders than 12<sup>th</sup> graders each year, and in 2007, for the first time, the rate was higher among 12<sup>th</sup> graders than it was among 9<sup>th</sup> graders.

**Do you ever use alcohol or drugs before OR during school?**



**Was offered, sold or given an illegal drug on school property in the past 12 months**



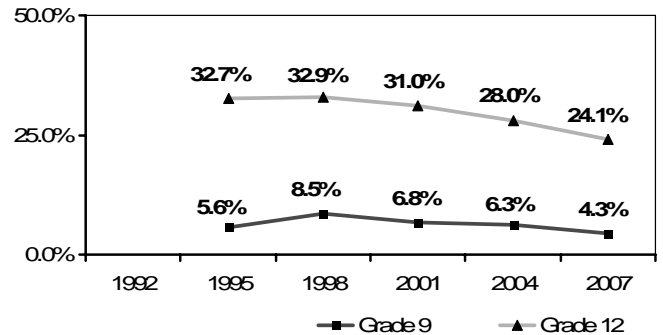
## Substance Use and Motor Vehicles

Driving motor vehicles after using alcohol or drugs, or riding with a friend who has been using alcohol or other drugs, has shown some improvement over the years. The percentage of students who reported such risky behaviors decreased gradually since the mid to late 1990s, showing the lowest rates in 2007.

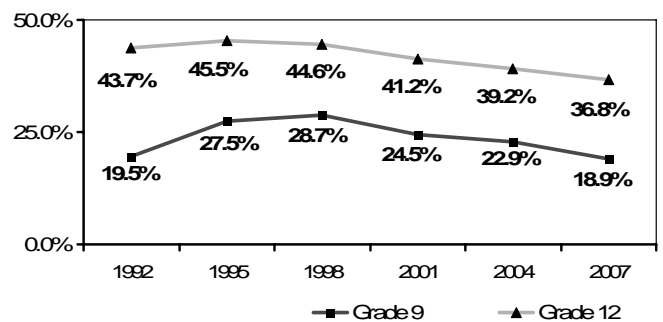
However, 24.1% of 12<sup>th</sup> graders drove motor vehicles after using alcohol or other drugs in 2007 and more than one in three (36.8%) of 12<sup>th</sup> graders rode with friends who had been using substances.

Although only a small proportion of 9<sup>th</sup> graders reported driving after using alcohol or other drugs (probably due to lack of a driver's license), just under one in five (18.9%) of 9<sup>th</sup> graders reported riding with others who had been using alcohol or other drugs in 2007.

**Drove motor vehicles after using alcohol or drugs one or more times in the past year**



**Often or rarely rides with friends after they have been using alcohol or drugs**

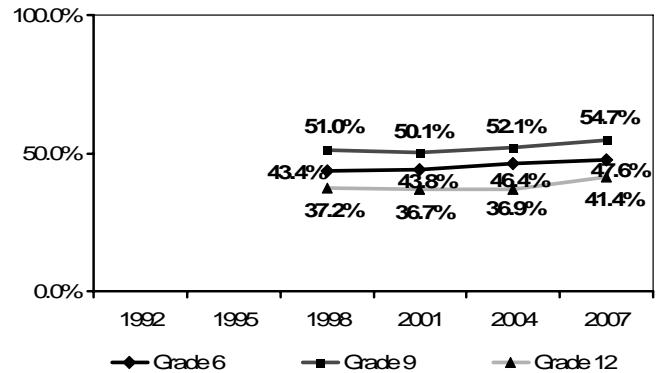


# Other Health Behaviors

## Physical Fitness

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 students with increases in 2007 for all grades. Sixth graders reported physical activity at a rate close to 50%. Ninth-graders reported a rate just above 50%. Twelfth grade students reported the biggest increase in this level of exercise, jumping from 36.9% in 2004 to 41.4% in 2007.

Physically active for 30 minutes or more on at least five of the last seven days



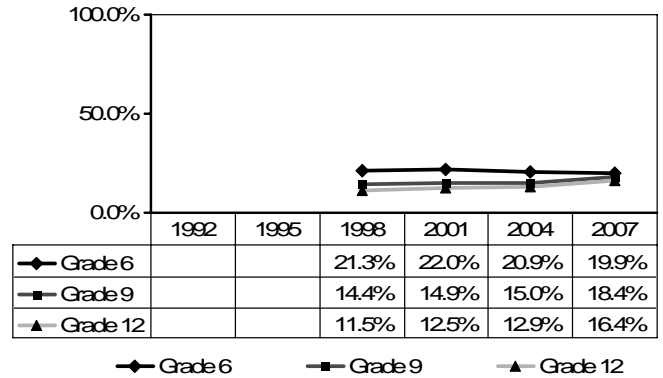
## Nutrition

Another health standard is eating five or more servings of fruits and vegetables per day. The trend has remained stable with only about one in five 6th graders reporting 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 18% and 12th graders reporting a rate of 16% meeting this nutrition standard. However, the rates for both 9th and 12th graders did increase since the 2004 survey.

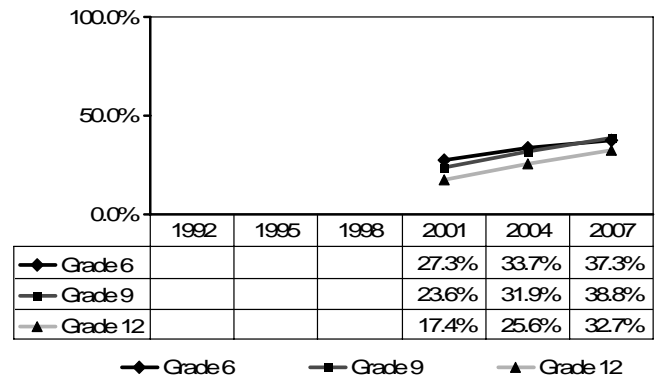
Twelfth-graders report less sport drink consumption than do either 6th or 9th graders. While about four in ten 6th and 9th graders report drinking one or more sports drinks a day, slightly less than one-third of 12th graders report doing so.

In 2001, the Minnesota Student Survey began to ask students about their consumption of pop or soda. The number of students reporting drinking one or more pop or soda has had a declining trend. Over six in ten students reported drinking pop or soda in 2001 and in 2007, slightly more than half of all students reported drinking pop/soda.

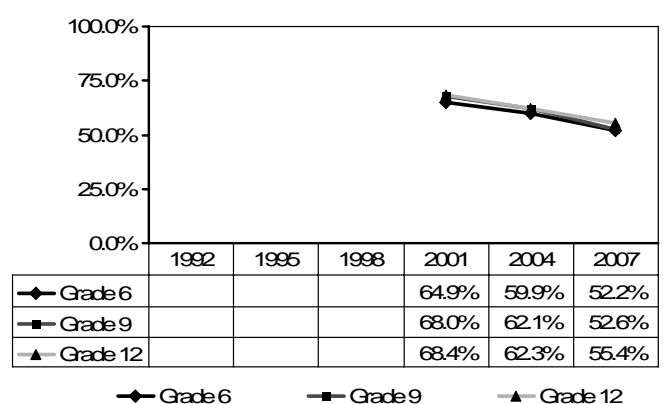
**Five or more servings of fruits and vegetables yesterday**



**One or more drinks of sports drinks yesterday**



**One or more drinks of pop or soda yesterday**

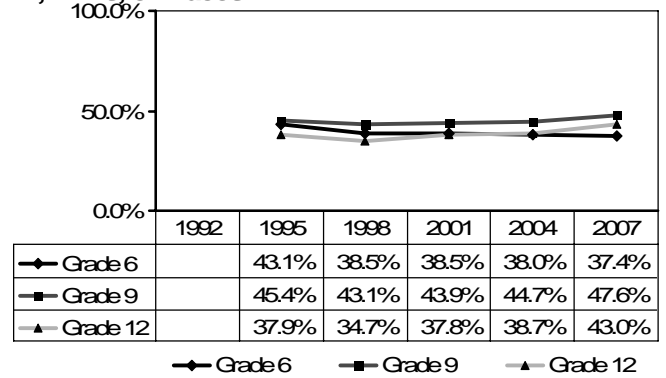


## Screen Time

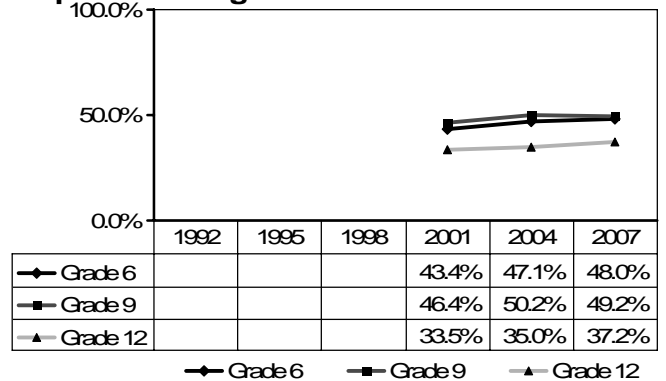
Over time, the reported rates of students spending six or more hours per week in front of a screen – TV or computer – has remained consistent. Since 1995, when students were first asked to estimate the number of hours per week they spend watching TV, DVDs or videos, approximately two-fifths of both 6<sup>th</sup> and 9<sup>th</sup> graders reporting spending six or more hours doing so. Twelfth grade students are the only grade level that has reported a gradual increase from 37.9% in 1995 when they reported watching six or more hours of TV, DVDs, or video to 43.0% in 2007.

In 2001, the survey asked students to also estimate the number of hours spent playing computer or video games. Over time, the rates have had little change. All grades experienced a slight increase of approximately four percentage points between 2001 and 2007.

**Spend 6 or more hours per week watching TV, DVDs, or videos**



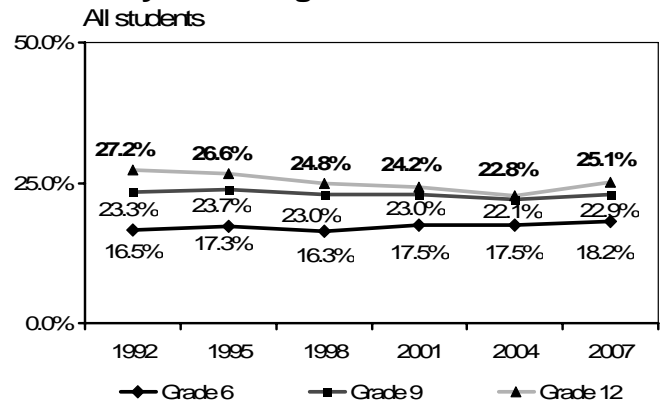
**Spend 6 or more hours per week playing computer or video games**



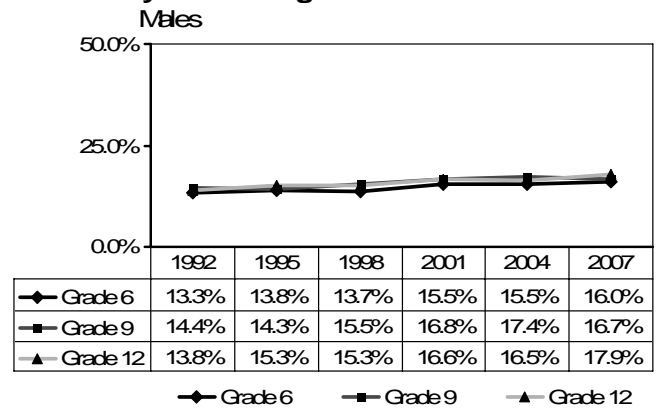
## Weight Perceptions

More 12<sup>th</sup> graders consistently report feeling overweight than do 6<sup>th</sup> or 9<sup>th</sup> graders. The percentage of males who feel they are overweight has been remarkably stable over time. Males at all grade levels – 6<sup>th</sup>, 9<sup>th</sup> and 12<sup>th</sup> – showed a rate in the mid-teens across all years. Females at all grade levels reported having a higher rate than males of feeling that they are overweight. Sixth grade females reported a trend line that is flat over time at about 20% feeling overweight. The percentage of 9<sup>th</sup> grade girls who felt overweight has decreased since the 1990s until this year when the rate increased slightly from 26.4% in 2004 to 28.9% in 2007. While the most dramatic shift has been in the 12<sup>th</sup> grade females, where the percentage who felt they were overweight declined from just over 40% in 1992 to just fewer than 30% in 2004, this year's survey revealed an increase to 32.0%. This is the highest rate since the 1998 survey administration.

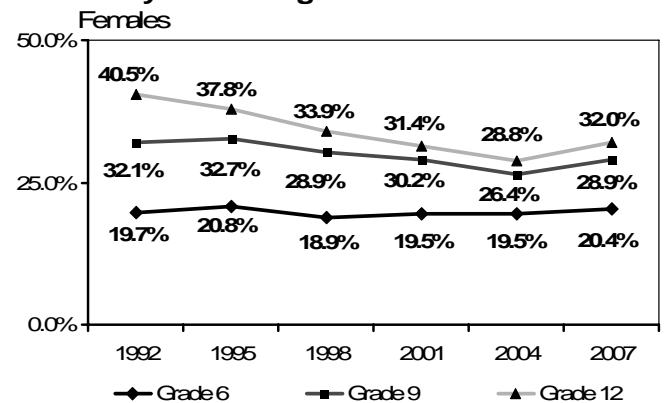
### Feel that they are overweight



### Feel that they are overweight



### Feel that they are overweight

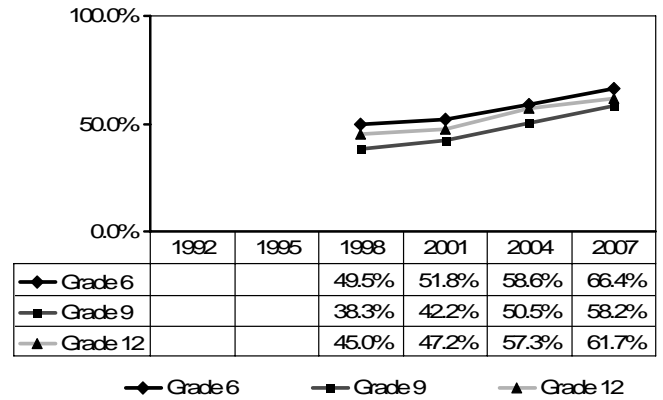




## Seatbelt Use

One measure of behavior that reduces injury is consistently wearing a seatbelt when riding in a car. Sixth and 9th grade students increased their reported rate of always using a seatbelt while riding in a car by about one-third from what they reported in 1998, while 12<sup>th</sup> graders showed a fifty percent increase since 1998. Ninth grade students have the lowest level of always using their seatbelts (58.2%), as compared with 6<sup>th</sup> graders (66.4%) and 12<sup>th</sup> graders (61.7%) in 2007.

**Always wears a seatbelt when riding in a car**



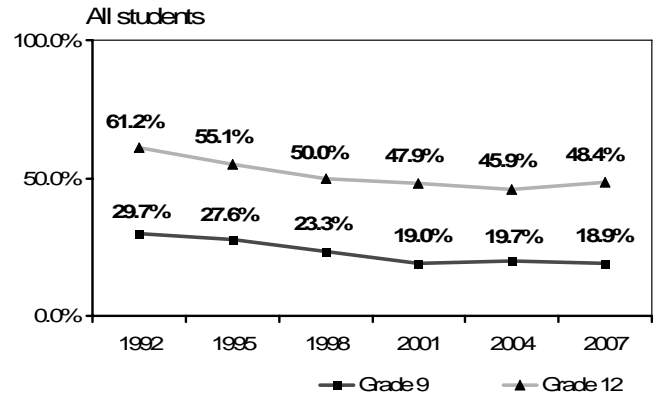
# Sexual Behavior

The percentage of students who report having engaged in sexual intercourse fell steadily between 1992 and 2001. However, this downward trend lost strength starting 2001 and has remained relatively consistent ever since.

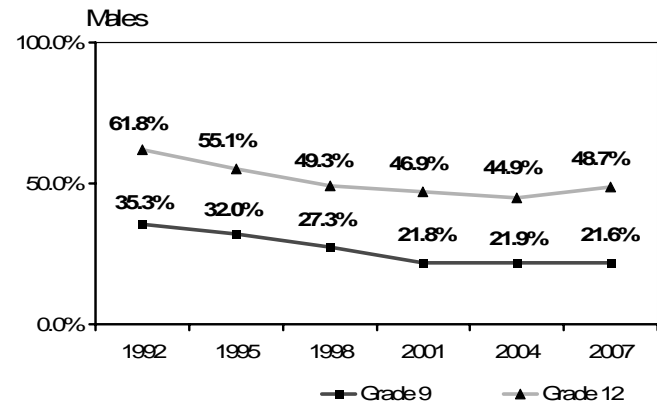
For 9<sup>th</sup> grade males, the percentage who reported having engaged in sexual intercourse fell from 35.3% in 1992 to 21.8% in 2001 and then remained about the same between 2001 and 2007. Among 9<sup>th</sup> grade girls, the percentage engaging in sexual intercourse also decreased steadily from 24.3% in 1992 to 16.4% in 2001 and has remained constant ever since.

Reported sexual activity among 12<sup>th</sup> grade males and females declined substantially and steadily between 1992 and 2004. Both 12<sup>th</sup> grade male and females reported increases in 2007. Slightly less than one-half of both 12<sup>th</sup> grade males and females report having engaged in sexual activity in 2007.

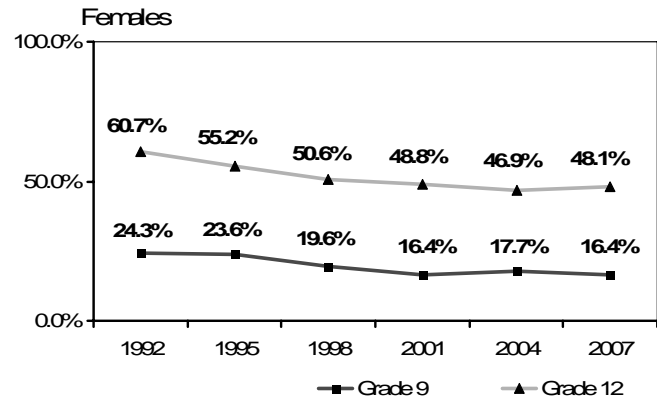
**Ever had sexual intercourse**



**Ever had sexual intercourse**

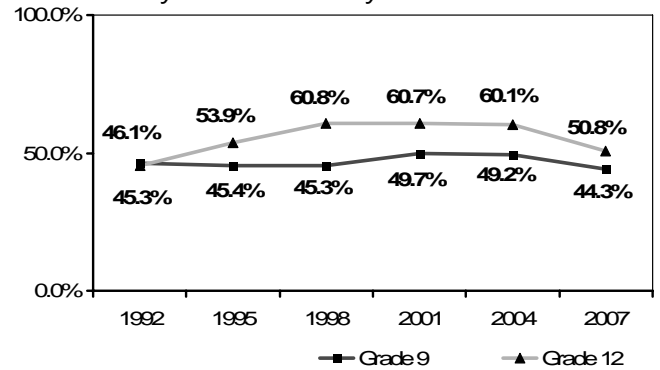


**Ever had sexual intercourse**

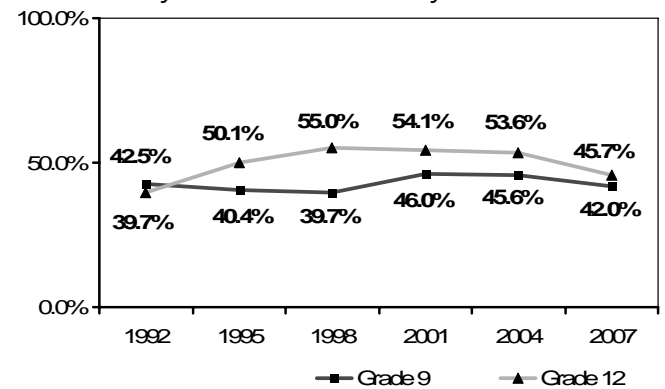


Compared to 1992, a greater percentage of sexually active students now report having talked with their sexual partner about protection from sexually transmitted diseases and HIV/AIDS. However, all of the positive change in this indicator occurred in the mid- to late nineties. Between 1998 and 2004, there was no improvement in the percentage of sexually active males and females who reported discussing sexually transmitted diseases with their partner. In 2007, there was a significant decrease in the number of sexually active students who talked with every partner about STDs/HIV.

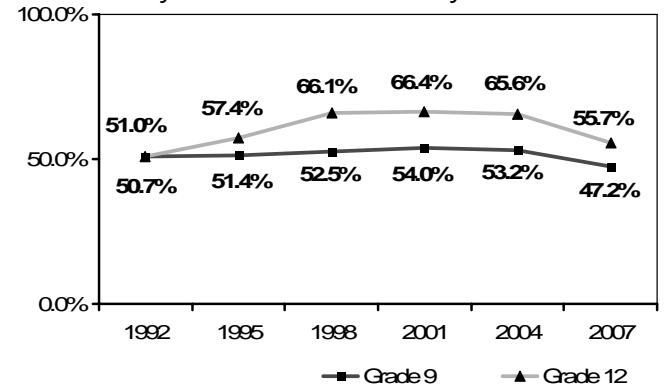
**Talked with every partner about STDs/HIV**  
Sexually active students only



**Talked with every partner about STDs/HIV**  
Sexually active male students only

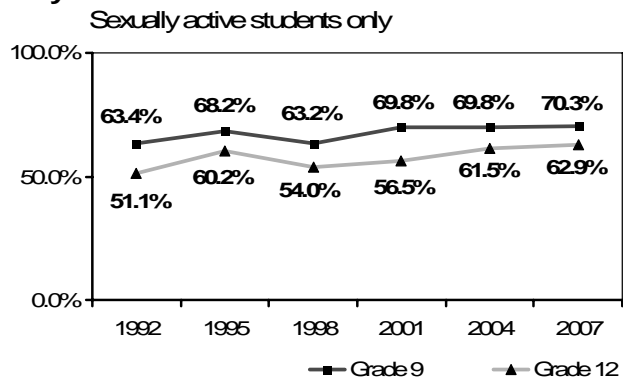


**Talked with every partner about STDs/HIV**  
Sexually active female students only



Despite the fact that sexually active students talk less frequently about transmitting STDs and HIV with their partners, students reported an increase in the use of condoms by sexually active students in 2007 in comparison to 1992. In the more recent period of 2001-2007, the percentage of sexually active students who reported that a condom was used the last time they had sexual intercourse remained relatively unchanged for 9th grade students and increased for 12th grade students.

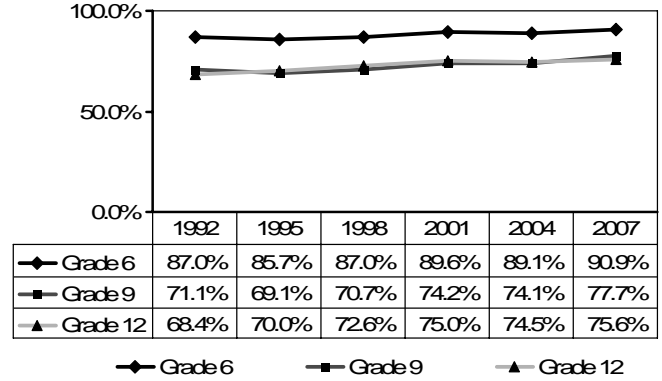
**You or your partner used a condom the last time you had intercourse**



# Families

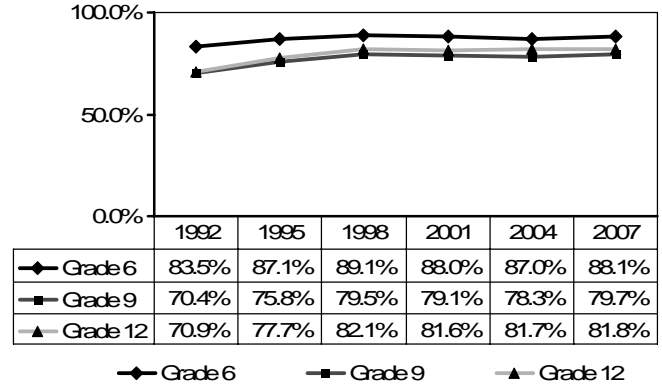
Positive relationships between youth and their parents have been consistently high over time, especially for younger students – nine out of ten students in 6<sup>th</sup> grade saying their parents care very much. More than three-quarters of 9th and 12th graders give their parents the same high mark.

**Feel your parents care about your very much**

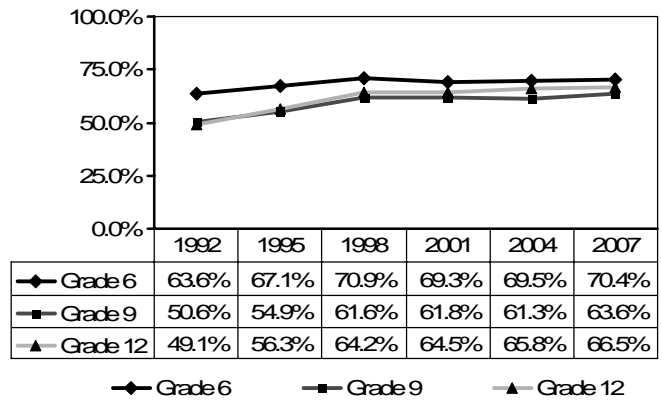


Regarding communication with parents, all students reported mothers more often being more approachable than fathers. Students in the early nineties reported an improvement in communication with both mothers and fathers and the results have been steady since then. Nearly nine out of ten 6<sup>th</sup> 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. Not quite eight in ten students in both 9<sup>th</sup> and 12<sup>th</sup> grade reported that they could talk to their mothers most or some of the time while about two-thirds reported that they could talk to their fathers most or some of the time.

**Can talk with your mother about problems most or some of the time**

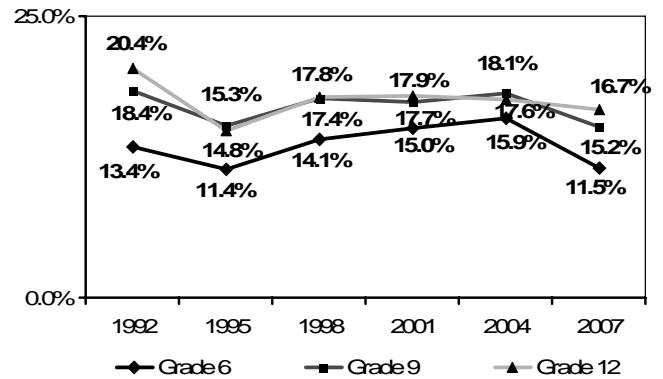


**Can talk with your father about problems most or some of the time**



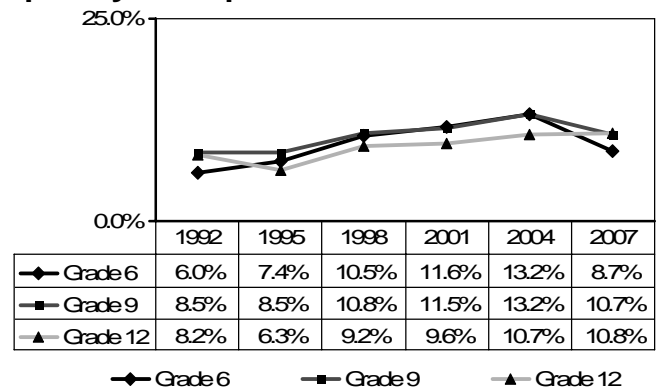
Students are in no way immune to trouble in their families. One question on the survey asks if alcohol use by any family member “repeatedly caused problems such as family, health, job or legal problems.” At all grade levels, less than one-fifth of students reported such problems. The rates for all grades dipped in 1995 and have risen gradually for 6th graders and 9th graders since then. However, all three grades reported a significant decrease between 2004 and 2007. Sixth graders report the biggest rate drop from 15.9% in 2004 to 11.5% in 2007.

**Alcohol use by any family member has repeatedly caused problems**



The same question was asked about repeated consequences of drug use by anyone in the family. After a steady increase in all three grades since 1995, the 2007 rates dropped for both 6th and 9th grade students, while staying stable for 12th graders. In 2004, 13.2% of 6th and 9th grade students reported that drugs caused repeated consequences for their family; in 2007 this rate dropped to 8.7% for 6th graders and 10.7% for 9th graders.

**Drug use by any family member has repeatedly caused problems**



# 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 six years the survey was conducted -- 1992, 1995, 1998, 2001, 2004 and 2007. If a school district did not participate in one of these years, none of its survey data between 1992 and 2007 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 helps to ensure that differences seen from year to year are not merely the result of which school districts happened to participate in a given year. Fortunately, most school districts have participated in each year of the survey. Between 1992 and 2007, about 786,000 students from regular public schools completed surveys; more than 668,000 of these students (85%) attended school in districts that participated all six times between 1992 and 2007 and are thus included in the analysis for this trend report.

## Questionnaire Design and Year-to-Year Comparisons

Some of the 2007 survey instrument questions were changed from the 2004 survey instrument. While most questions in

this report stayed the same, a few questions that had updated or improved wording. Caution must be used when making comparisons over time for any questions in which the wording has changed. For detailed changes, please refer to the state tables or 2007 survey instrument.

## Weighting the Data to Adjust for Student Participation Rates

For various reasons, ranging from illness and truancy to schedule conflicts and simple refusal, 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 first 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).

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

Where, for each grade level:

$E(\text{dist.})$  = enrollment in district,

$E(\text{state})$  = enrollment in all districts participating in MSS,

$S(\text{state})$  = total surveys completed statewide, and

$S(\text{dist.})$  = total surveys completed in district.

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

### **Trend Report and Statewide Tables**

Because of the exclusion of certain districts and the weighting procedure described above, figures published in the trend report may differ slightly from figures in the statewide tables for the same question. (The statewide tables are based on all regular school districts and are unweighted counts). Usually these differences are very small. Each set of figures was prepared for a specific purpose. When focusing on one particular year, it is best to use the statewide tables. When focusing on change over time, it is best to use the weighted trend results such as those published in this report.

### **Do Students Tell the Truth?**

One question sometimes raised 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 survey 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 six Minnesota Student Survey 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 survey 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.

# 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 2007 Minnesota Student Survey. Also, the Performance Management and Quality Improvement staff of the Minnesota Department of Human Services, the Center for Health Statistics staff of the Minnesota Department of Health, and the Office of Justice Programs staff of the Minnesota Department of Public Safety were integral to the full implementation, analysis and dissemination of the results of the Minnesota Student Survey. Survey dissemination, collection and scanning services were provided by Survey and Ballot Systems, Inc.

## Project Team

### Minnesota Department of Education

Allison Anfinson\*

Carol Thomas

### Minnesota Department of Health

Ann Kinney\*

Peter Rode\*

### Minnesota Department of Human Services

Phyllis Bengtson\*

Carol Falkowski

Efren Leon

Vicki Kunerth

Eunkyung Park\*

### Minnesota Department of Public Safety

Jeri Boisvert

Danette Buskovick\*

*\*Trend report writing team*