

METROWEST
COMMUNITY
HEALTH CARE
FOUNDATION



*Results of the
2006 MetroWest
Adolescent Health Survey*

*EXECUTIVE SUMMARY
MetroWest Regional
Middle School Report*

Funded by:

The MetroWest Community Health Care Foundation

Submitted by:

Health and Human Development Programs
Education Development Center, Inc.

Spring 2007

2006 MetroWest Adolescent Health Survey EXECUTIVE SUMMARY MetroWest Regional Middle School Data

INTRODUCTION

The MetroWest Adolescent Health Survey (MWAHS) is a ten-year initiative of the MetroWest Community Health Care Foundation to provide school districts with timely, local data on the health and risk behaviors of middle and high school students. The survey focuses on behaviors and attitudes related to the leading causes of morbidity and mortality in the adolescent population, as well as on issues of particular interest to the MetroWest communities. The MWAHS will be conducted every other year for the next decade so that changes can be measured over time, allowing communities to monitor trends, identify new priorities, and measure progress towards achieving a healthier adolescent population.

The MWAHS initiative was originally designed as an effort to collect data from high school students, with 18 districts participating in the first survey administration. However, recognizing that some students initiate risk behaviors prior to 9th grade and that some risk behaviors are more prevalent in middle school than high school (e.g., bullying), multiple school districts requested that a middle school survey be conducted. To meet this request, the Foundation supported the development and administration of a middle school questionnaire for 7th and 8th grade students. Middle schools in 13 districts participated in this survey.

The MWAHS development, coordination of survey administration, analysis, and reporting were carried out by the Division of Health and Human Development Programs at Education Development Center, Inc. The results described here reflect the first administration of the MWAHS for 7th and 8th grade students, which took place in the Fall of 2006.

METHODS

Middle school students in 13 districts participated in the 2006 MWAHS. Rather than surveying a sample of students, a census was conducted of all 7th and 8th grade students who were present on the days of the survey administration. This allows us to conclude that the results described in this report truly reflect the range of behaviors of middle school students in these MetroWest districts. Additional districts may join this effort over time, increasing the generalizability of the regional data.

The MWAHS is an anonymous and voluntary survey. Parents/guardians were informed of the survey in advance and given the opportunity to opt their child(ren) out if desired. Students were also informed of the voluntary nature of the survey and could decide on their own whether or not to participate. Very few students (2.7%) did not participate for these reasons.

The survey administration protocol took numerous steps to protect students' anonymity and to provide an environment in which they could complete their surveys privately. Such steps have been shown to result in valid and reliable data collection from youth.

In total, 6,875 middle school students in the MetroWest region participated in the MWAHS, representing 92.0% of students in the 13 participating school districts.

The MWAHS is largely based on the Youth Risk Behavior Surveillance System (YRBSS), a program of the Centers for Disease Control and Prevention.¹ The YRBSS includes a middle school survey uniquely designed to monitor trends in the prevalence of risk behaviors contributing to the leading causes of morbidity and mortality among middle school youth, including:

- ◆ *Tobacco use*
- ◆ *Alcohol and other drug use*
- ◆ *Unhealthy dietary behaviors*
- ◆ *Inadequate physical activity*
- ◆ *Suicide*
- ◆ *Violence.*

Building on the YRBSS, the middle school MWAHS was specifically designed for 7th and 8th grade youth. It is shorter, more developmentally appropriate, and written at a lower reading level than the high school survey. The middle school MWAHS addresses a subset of behaviors from the high school survey which are most relevant to younger adolescents. Individual questions generally focus on the initiation of risk behaviors rather than behavioral patterns.

Because the YRBSS is new at the middle school level, comparable national and state data are not available at this time. Massachusetts is administering its first middle school survey in 2007.

RESULTS

SUBSTANCE USE

Initiation of tobacco, alcohol, and marijuana use begins in the middle school years for a considerable number of youth. Alcohol is the most prevalent substance used by middle school students in the MetroWest region, with 21.9% having used alcohol in their lifetime and 9.0% reporting drinking in the past 30 days. The percentages of students who report lifetime cigarette smoking and marijuana use are lower, yet it is notable that about one in ten students already report having smoked cigarettes in their lifetime and about one in twenty have experimented with marijuana. Early experimenters are at increased risk of becoming habitual users and developing lifelong patterns of substance misuse. Inhalant use is also relatively high among both male and female middle school students; 9.9% of 8th grade students report having used inhalants in their lifetime.

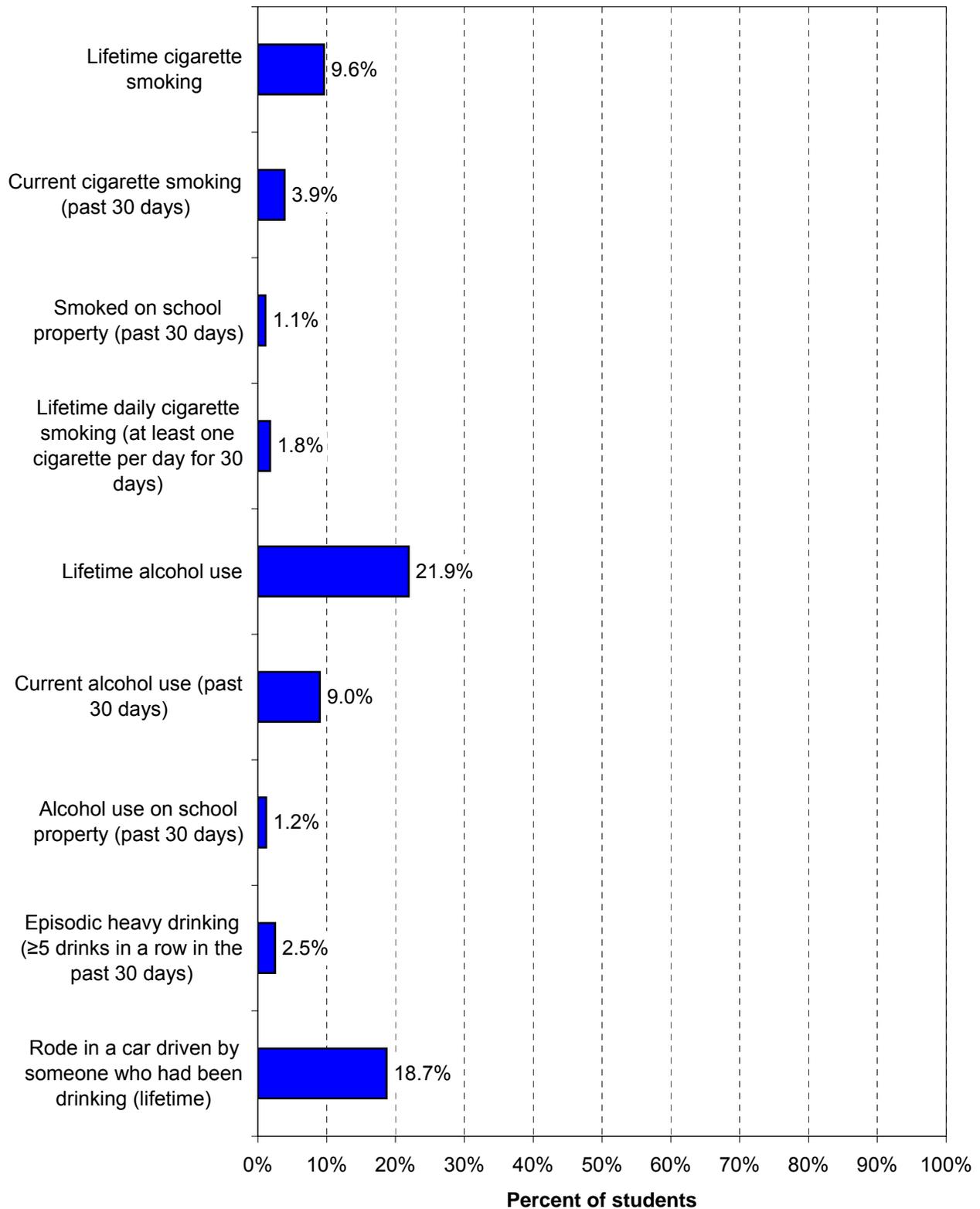
Tobacco Use

- ◆ 9.6% of 7th and 8th grade students in the MetroWest region have ever smoked a cigarette, and 3.9% of students have smoked cigarettes on one or more of the past 30 days.
- ◆ Few students report smoking a cigarette before age 11 years (1.4% of females and 2.8% of males).
- ◆ Cigarette smoking is higher among males than females. For example, 11.2% of males and 7.9% of females report lifetime smoking, and 4.8% of males and 2.9% of females have smoked on one or more of the past 30 days.
- ◆ Smoking increases with grade: 5.4% of 7th grade students and 13.6% of 8th grade students have smoked a cigarette in their lifetime.
- ◆ Few students are yet daily smokers: 1.8% of students report having smoked cigarettes daily (at least one cigarette per day for 30 days) at some point in their lifetime (1.2% of females and 2.3% of males). The percentage of students reporting daily smoking in their lifetime in 8th grade (2.5%) is higher than in 7th grade (0.9%).
- ◆ Of the 3.9% of students who smoked in the past 30 days, only 14.3% smoked more than 10 cigarettes per day on the days that they smoked.
- ◆ 1.1% of students report smoking on school property in the past 30 days.
- ◆ Of the 4.2% of students who tried to obtain cigarettes in the past 30 days, 18.1% gave someone else money to buy them, 16.4% borrowed/bummed them, 15.0% took them from a store or family member, 10.8% bought them in a store, 8.7% were given them by an adult, and 31.0% got them some other way.

Alcohol Use

- ◆ 21.9% of 7th and 8th grade youth in the MetroWest region have used alcohol in their lifetime. Lifetime alcohol use was defined having a “drink of alcohol, other than a few sips.” Additional detail specified that all questions on alcohol use included “drinking beer, wine, wine coolers, and liquor such as rum, gin, vodka, or whiskey” and did *not* include “drinking a few sips of wine for religious purposes.”
- ◆ 8.2% of youth had their first drink of alcohol before age 11 years (5.2% of females and 11.2% of males).
- ◆ About one in four males and one in five females report lifetime alcohol use (25.7% vs. 18.0%). Current use is also somewhat higher among males than females (10.2% vs. 7.9%).
- ◆ Alcohol use increases with grade. For example, 5.2% of students report current use in 7th grade. By 8th grade, 12.7% of students report current use.
- ◆ 2.5% of students report episodic heavy drinking (or “binge” drinking). This is defined as having 5 or more drinks in a row within a couple of hours on one or more occasions in the past 30 days. Episodic heavy drinking is higher for males (3.1%) than females (1.8%) and increases from 1.1% in 7th grade to 3.7% in 8th grade.
- ◆ 1.2% of students report using alcohol on school property in the past 30 days.
- ◆ 18.7% of students report riding in a car driven by someone who had been drinking alcohol in their lifetime. It is not known whether the driver is a parent, youth, or other individual.

**Tobacco Use, Alcohol Use, and Impaired Driving among Middle School Students
MetroWest Region (n=6,875)
MetroWest Adolescent Health Survey, 2006**



Marijuana Use

- ◆ 4.8% of students have used marijuana in their lifetime, and 3.0% of students have used marijuana in the past 30 days.
- ◆ Lifetime marijuana use is about twice as high among males as females: 6.2% of males and 3.3% of females have used marijuana in their lifetime. In the past 30 days, 3.7% of males and 2.2% of females used marijuana.
- ◆ Lifetime marijuana use increases from 2.5% in 7th grade to 7.0% in 8th grade. Similarly, current marijuana use increases from 1.9% in 7th grade to 3.9% in 8th grade.

Inhalant Use

- ◆ 8.3% of youth have used inhalants in their lifetime (sniffed glue, breathed the contents of spray cans, or inhaled any paints or sprays to get high).
- ◆ Inhalant use is similar among males (8.9%) and females (7.8%).
- ◆ Lifetime inhalant use increases from 6.7% in 7th grade to 9.9% in 8th grade.

Illegal Use of Prescription Drugs

- ◆ 1.4% of youth have used steroids without a doctor's prescription (1.2% of females and 2.0% of males).
- ◆ 1.6% of students have used prescription drugs like Ritalin, Adderall, OxyContin, or Vicodin without a doctor's prescription (using someone else's prescription or obtaining the drugs illegally).
- ◆ Lifetime illegal use of prescription drugs increases from 0.9% in 7th grade to 2.3% in 8th grade.

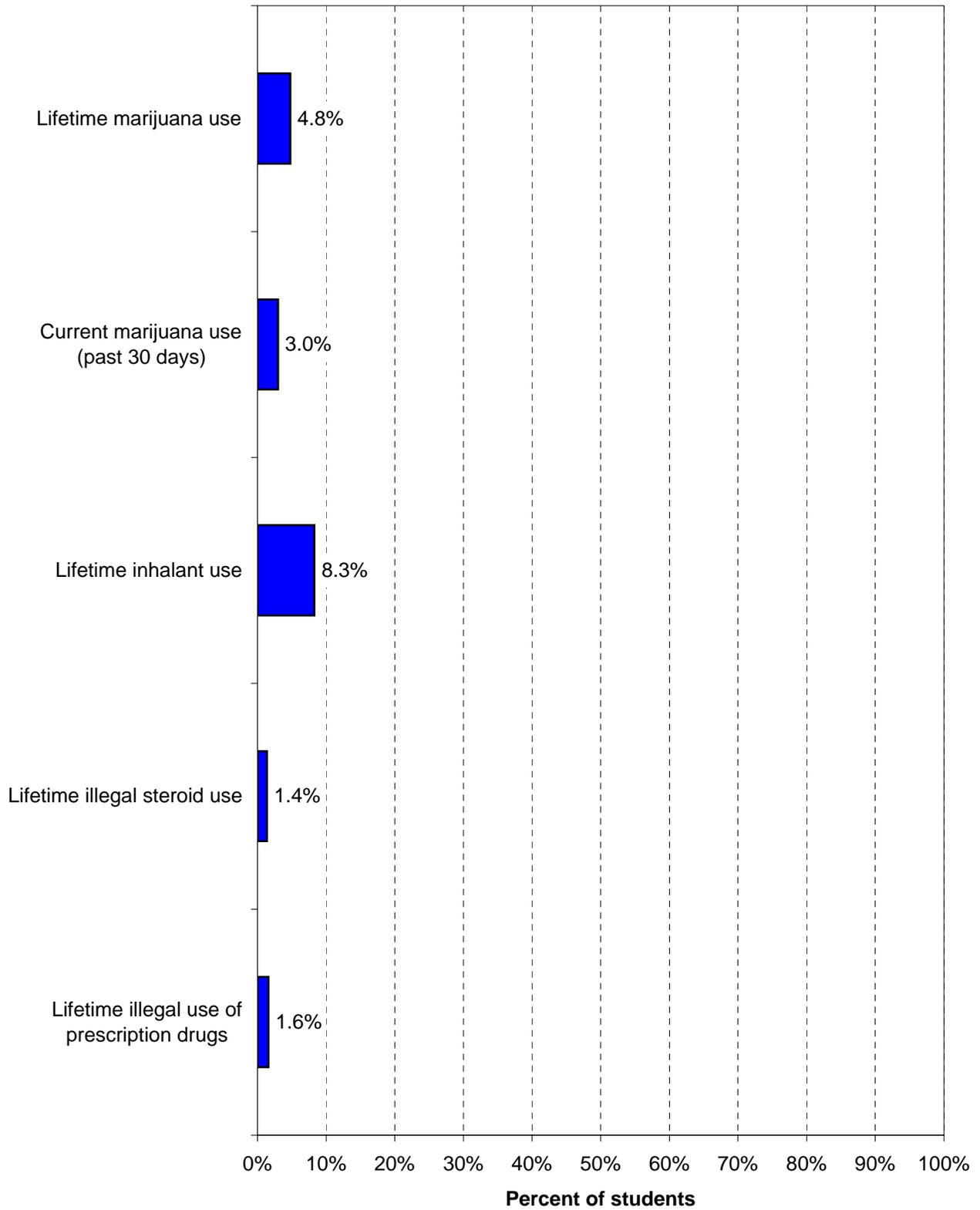
Availability of Substances on School Property

- ◆ 2.9% of youth were offered, sold, or given tobacco or alcohol, and 3.0% were offered, sold, or given marijuana or other drugs on school property in the past 12 months.
- ◆ Males and older students were more likely to say they were offered, sold, or given these substances on school property. For example, 1.8% of females and 4.0% of males report being offered, sold, or given tobacco or alcohol on school property.

Marijuana and Other Substance Use among Middle School Students

MetroWest Region (n=6,875)

MetroWest Adolescent Health Survey, 2006



VIOLENCE

Violence-related behavior affects a majority of middle school youth in some form. In the MetroWest region, over two-thirds of 7th and 8th grade students (68.9%) report experiencing one or more forms of violence-related behavior in their lifetime (being in a physical fight, carrying a weapon, and/or being the victim of bullying). Specifically, 44.5% of students report being in a physical fight in their lifetime, and 17.6% report carrying a weapon, such as a gun, knife, or club, in their lifetime. Similar to national and regional trends, physical fighting and weapon carrying are more common among males. Notably, bullying is reported by 43.9% of students in the past 12 months. Bullying affects both males and females about equally, with many reporting this problem on school property. The emergent problem of bullying through the use of electronic media is reported by 15.6% of students.

Personal Safety

- ◆ 3.0% of students didn't attend school in the past 30 days on at least one occasion because they felt they would be unsafe at school or on the way to or from school (2.8% of females and 3.2% of males).
- ◆ 19.1% of students had their property (such as clothing or books) stolen or deliberately damaged in the past 12 months. More males report personal property damage or theft (23.1%) than females (15.0%).

Physical Fighting

- ◆ 44.5% of 7th and 8th grade students have been in a physical fight in their lifetime.
- ◆ Physical fighting is much more prevalent among males, with 62.5% of males having fought in their lifetime in comparison with 26.3% of females.
- ◆ 18.9% of students (29.8% of males and 7.7% of females) were in a physical fight on school property in their lifetime.
- ◆ 5.8% of students (8.6% of males and 2.9% of females) were ever injured in a physical fight and had to receive medical treatment.

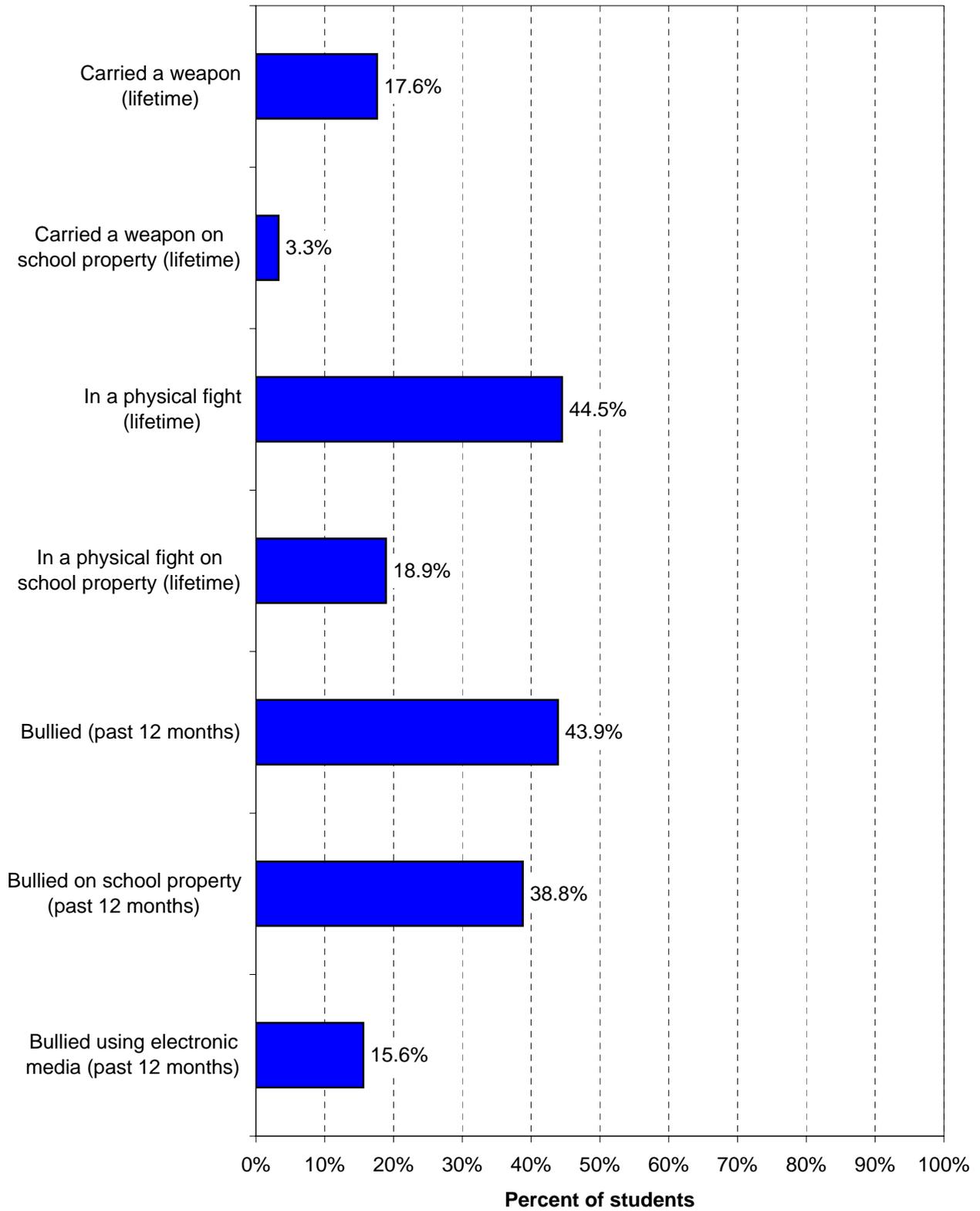
Weapons

- ◆ Overall, 17.6% of middle school youth report carrying a weapon, such as a gun, knife, or club, in their lifetime.
- ◆ The percentage of males carrying weapons (27.8%) is substantially higher than that of females (7.3%).
- ◆ By 8th grade, 19.8% of students have carried a weapon in their lifetime.
- ◆ 3.3% of youth report having carried a weapon on school property (5.0% of males and 1.5% of females)

Bullying

- ◆ 43.9% of youth report being the victim of bullying behavior in the past 12 months, and 38.8% report being the victim of bullying on school property.
- ◆ The prevalence of bullying does not differ substantially by gender (43.1% for males and 44.7% for females) or by grade (44.0% for 7th grade, 43.7% for 8th grade).
- ◆ Electronic bullying (use of electronic media such as the Internet and cell-phones to bully, tease, or threaten) is reported by 15.6% of students in the past 12 months. More females than males report being bullied this way (18.4% vs. 12.8%).
- ◆ Electronic bullying increases from 7th grade (13.9%) to 8th grade (17.3%).
- ◆ A majority (69.8%) of youth are online at least once a day, most often at home. This suggests the importance of parental monitoring of computer use, as well as educational opportunities to support online safety and reduce misuse, including online bullying.

**Weapon Carrying, Physical Fighting, and Bullying among Middle School Students
MetroWest Region (n=6,875)
MetroWest Adolescent Health Survey, 2006**



BEHAVIORS RELATED TO UNINTENTIONAL INJURY

In addition to violent behaviors related to intentional injury, students were asked about behaviors related to the leading causes of unintentional injury: lack of seatbelt use, lack of helmet use on bicycles and on rollerblades/skateboards, and riding in a car with an impaired driver. The increase in these risk behaviors from 7th to 8th grade exemplifies a trend towards less safe behavior which worsens through the high school years.

Seatbelt Use

- ◆ 5.5% of students never/rarely wear a seatbelt when riding in a car driven by someone else.
- ◆ Males are somewhat more likely than females to never/rarely wear a seatbelt (7.2% vs. 3.7%).
- ◆ Seatbelt use decreases with age: 8th grade students are more likely than 7th grade students to never/rarely wear a seatbelt (6.7% vs. 4.2%).

Helmet Use

- ◆ Of the 92.1% of students who rode a bicycle in the past 12 months, 38.0% never/rarely wore a helmet. More males than females report never/rarely wearing a helmet (43.0% vs. 32.6%).
- ◆ 8th grade students are more likely to never/rarely wear a helmet (44.6%) than 7th grade students (31.7%) when bicycling.
- ◆ Use of helmets when rollerblading/skateboarding follows a similar pattern. Among the 60.1% of youth who rollerblade/skateboard, 48.1% never/rarely wear a helmet.
- ◆ Males are more likely to never/rarely wear a helmet when rollerblading/skateboarding (55.6%) than females (10.4%), and 8th grade students are more likely to never/rarely wear a helmet (55.0%) than 7th grade students (41.8%).

Impaired Driving

- ◆ As noted earlier, 18.7% of students report riding in a car driven by someone who had been drinking alcohol in their lifetime.
- ◆ Riding in a car with an impaired driver does not vary substantially by gender, and is reported by 19.4% of males and 17.9% of females.
- ◆ 14.8% of 7th grade students have ridden with an impaired driver in their lifetime. By 8th grade, 22.4% have ridden with an impaired driver.

STRESS, MENTAL HEALTH, AND SUICIDE

A strong interest in student mental health was expressed by the MetroWest community at both the middle and high school levels. Some questions on the survey addressed student stress and depression; other items asked students about suicidal ideation and behaviors. Following national trends, reports of stress, depression, suicidal ideation, and suicide attempts in the MetroWest region are higher among females than males. It is notable that, by 8th grade, 12.4% of youth report having seriously considered suicide in their lifetime and 9.6% report having hurt themselves on purpose. Further, 17.4% of females and 13.6% of males say they have felt sad or hopeless almost every day for two or more weeks during the past 12 months.

Overall Health and Stress

- ◆ 76.0% of youth rate their own health as “very good” or “excellent,” 19.9% rate their health as “good,” and 4.1% rate their health as “fair” or “poor.” These figures are similar for males and females, as well as for 7th and 8th grade students.
- ◆ 38.5% of youth report that their life was “somewhat” or “very” stressful in the past 30 days.
- ◆ More females (44.4%) than males (32.8%) report feeling somewhat/very stressed.
- ◆ Reports of stress increase substantially from 7th grade (32.3%) to 8th grade (44.7%).

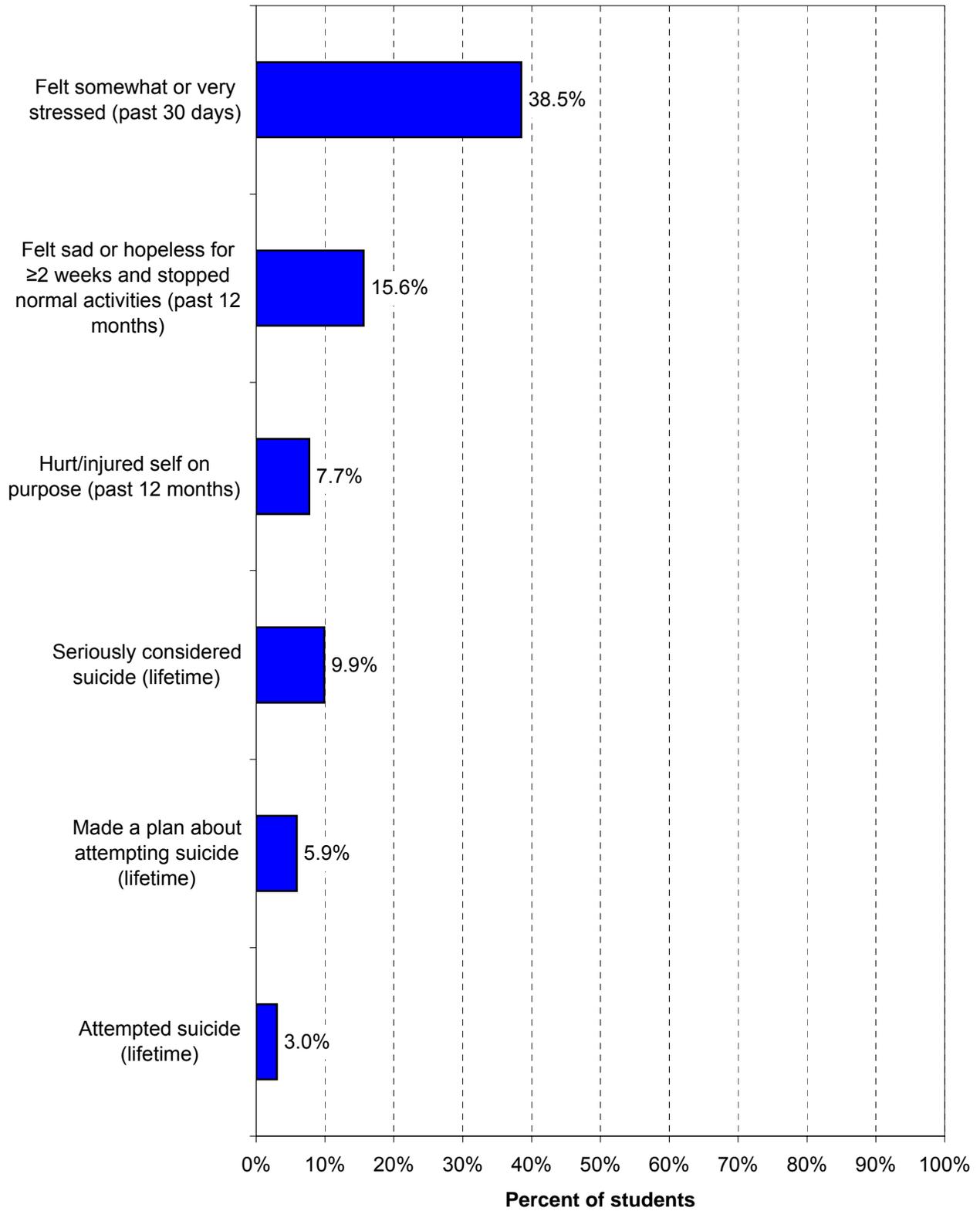
Mental Health and Suicide

- ◆ 15.6% of students report having felt sad or hopeless almost every day for two or more weeks during the past 12 months. This symptom of depression is reported more often by females (17.7%) than males (13.5%), and increases from 7th grade (13.6%) to 8th grade (17.4%).
- ◆ 7.7% of youth (8.7% of females and 6.6% of males) have cut, burned, or tried to hurt themselves on purpose in the past 12 months. This behavior increases from 7th grade (5.7%) to 8th grade (9.6%).
- ◆ 9.9% of students have seriously considered suicide in their lifetime. Females report suicidal ideation somewhat more often than males (10.9% vs. 8.8%). By 8th grade, 12.4% of middle school youth have seriously considered attempting suicide during their lifetime.
- ◆ 5.9% of youth have made a plan about attempting suicide in their lifetime, with little difference between females (6.2%) and males (5.6%).
- ◆ 3.0% of students report attempting suicide in their lifetime (3.1% of females and 2.8% of males).
- ◆ In 7th grade, 1.9% of students report having ever attempted suicide. By 8th grade, 4.0% of students have attempted suicide in their lifetime.

Stress, Mental Health, and Suicide among Middle School Students

MetroWest Region (n=6,875)

MetroWest Adolescent Health Survey, 2006



NUTRITION, WEIGHT CONTROL, AND PHYSICAL ACTIVITY

The majority (93.5%) of middle school students report being in a Physical Education class at least once a week and 69.8% of females and 76.7% of males participate in at least one sports team. Despite these levels of participation, 20.4% of middle school youth in the MetroWest region are either at risk for becoming overweight or overweight based on their body mass index (BMI), which was calculated from information students gave on their height and weight. 21.3% of youth did not participate in vigorous physical activity on three or more of the past 7 days, and 31.3% ate fast food on the day preceding the survey. Nonetheless, overweight in the MetroWest region is lower than in the United States. Notably, while 20.4% of middle school students are at risk for becoming overweight or overweight, 34.1% of students are currently trying to lose weight, and 12.6% of females report fasting for more than 24 hours.

Overweight, Weight Perception, and Weight Control

- ◆ 13.4% of middle school youth in the MetroWest region are at risk for becoming overweight and 7.0% are overweight, based on self-reported height and weight data used to calculate body mass index.
- ◆ The proportion of youth who are at risk for becoming overweight or overweight increases from 19.5% in 7th grade to 21.4% in 8th grade.
- ◆ Using self-reported height and weight, more males than females are at risk of becoming overweight (15.1% vs. 11.6%) and overweight (9.4% vs. 4.6%).
- ◆ When asked about how they consider their own weight, fewer females than males describe themselves as overweight (21.5% vs. 24.0%). However, substantially more females (41.4%) than males (26.8%) report they are currently trying to lose weight.
- ◆ 61.4% report exercising to lose weight/keep from gaining weight (68.7% of females and 54.1% of males), and 38.1% report dieting (47.1% of females and 29.1% of males) in their lifetime.
- ◆ Females were also much more likely than males to report fasting for more than 24 hours (12.6% vs. 6.1%).
- ◆ 2.2% of youth report taking diet pills, liquids, or powders, and 2.7% report vomiting/taking laxatives to lose weight/keep from gaining weight.

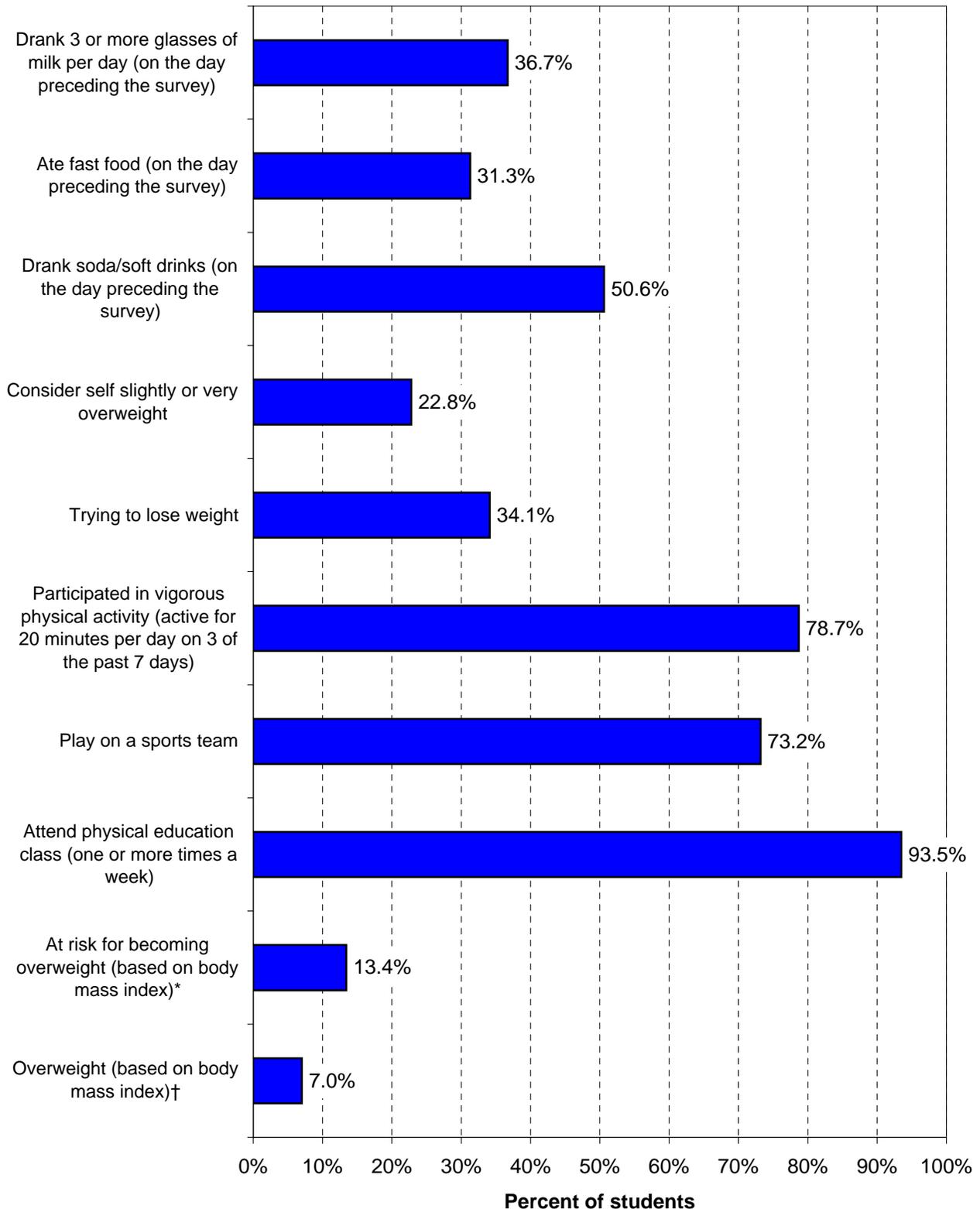
Nutrition

- ◆ 81.2% of youth ate fruit or drank 100% fruit juice, and 80.9% ate vegetables or green salad at least once on the day preceding the survey.
- ◆ 36.7% drank three or more glasses of milk on the day before the survey (42.2% of males and 31.3% of females).
- ◆ 83.2% of youth consumed other milk/dairy products on the day before the survey.
- ◆ 31.3% of youth ate fast food on the day before the survey.
- ◆ 50.6% drank soda/soft drinks on the day before the survey.

Physical Activity

- ◆ 78.7% of youth participated in vigorous physical activity on three or more of the past 7 days (81.6% of males and 75.6% of females).
- ◆ 73.2% of youth (69.8% of females and 76.7% of males) play on one or more sports teams.
- ◆ 93.5% of youth participate in Physical Education (PE) class on one or more days in the average school week.

Nutrition, Weight Control, Physical Activity, and Overweight among Middle School Students
MetroWest Region (n=6,875)
MetroWest Adolescent Health Survey, 2006



*Students who were ≥ 85 th percentile but ≤ 95 th percentile for body mass index by age and sex, based on reference data
 †Students who were ≥ 95 th percentile for body mass index by age and sex, based on reference data

SCHOOL ATTACHMENT AND ADULT SUPPORT

School attachment reflects a student's sense of connection with the school community, and has been identified as one factor that can promote academic success and healthy behaviors at the middle school level.²⁻⁷ Having a stable and supportive relationship with a caring adult has also been shown to be a protective factor for positive youth development.²⁻⁷ Due to a strong interest in both of these factors from multiple school districts in the MetroWest community, questions on school attachment and adult support were added to the survey.

School Attachment

The results of the regional MWAHS show that school attachment is significantly associated with lower engagement in risk behaviors across a range of categories including violence (physical fighting and weapon carrying), substance use (tobacco, alcohol, and marijuana), and suicidal ideation.

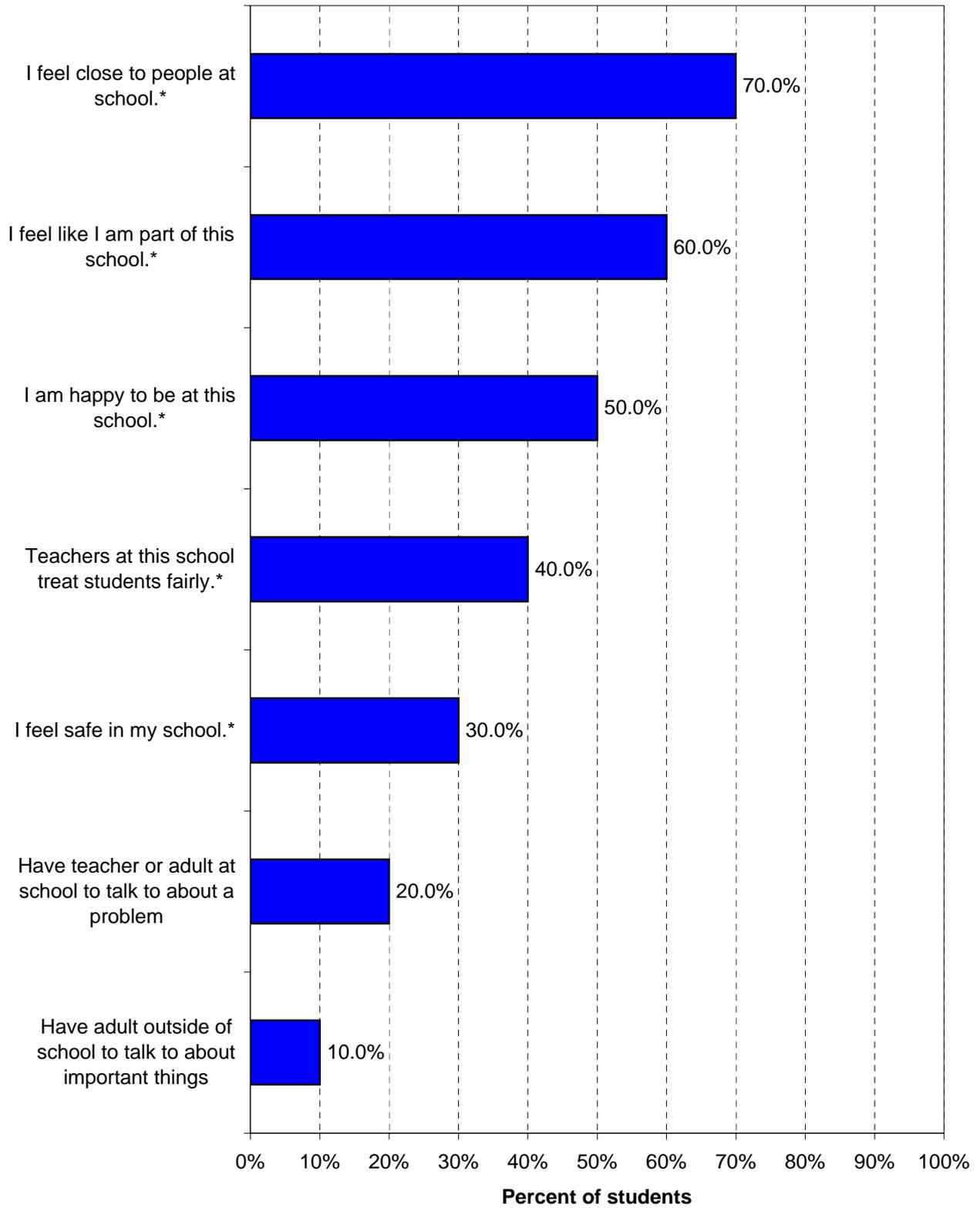
- ◆ A majority of students in the MetroWest region agreed with each of five statements reflecting elements of school attachment:
 - 79.6% of students feel safe in their school.
 - 75.3% of students feel like they are a part of their school.
 - 74.7% of students feel close to people at school.
 - 69.3% of students are happy to be at their school.
 - 64.9% of students feel that teachers treat students fairly.
- ◆ Overall school attachment in middle school is slightly higher among females than males, and higher among 7th grade students than 8th grade students.

Adult Support

The availability of a trusted adult at school students can talk with when they have a problem has also been identified as a potential protective factor,²⁻⁷ reducing risk behaviors and contributing to school success. In the MetroWest region, students who report they could talk with an adult at school about problems are significantly less likely to engage in such behaviors as physical fighting, alcohol use, and suicide-related thoughts and behaviors. The vast majority of students report there is an adult they can talk with outside of school; however, the minority that do not have this adult support are more likely to engage in risks.

- ◆ In the MetroWest region, 63.4% of students have at least one teacher or adult at school that they can talk to if they have a problem (64.7% of females and 62.1% of males).
- ◆ 64.5% of 7th grade students and 62.2% of 8th grade students report that they have a supportive adult at school.
- ◆ 89.4% of students have at least one adult outside of school to talk to about things that are important (90.3% of females and 88.5% of males).
- ◆ 56.8% of youth say the adult they can talk outside of school is a parent/adult family member, 2.6% have a non-family adult they can talk to, and 30.0% have both a family and non-family adult they can talk to about things that are important.

School Attachment and Adult Support among Middle School Students
MetroWest Region (n=6,875)
MetroWest Adolescent Health Survey, 2006



*Percent of students that agree or strongly agree with the statement

CONCLUSIONS

The 2006 MWAHS data is an invaluable resource in determining priorities for improving the health and wellbeing of youth. The fact that so many districts participated in this initial middle school survey shows a strong commitment to addressing the social, emotional, and developmental challenges that young adolescents face. While behaviors such as violence and bullying are common among middle school youth, other less prevalent behaviors like smoking and alcohol use call for attention because there is still opportunity to intervene before they become established. Understanding when youth initiate behaviors and what risks are prevalent in the middle school grades is critical for designing developmentally-appropriate prevention and intervention strategies.

As the MWAHS initiative continues in middle schools and high schools over the next decade, school and community personnel will be knowledgeable about trends occurring in both younger and older adolescent populations. This will provide a detailed and solid foundation from which they can work to improve the health and safety of the MetroWest communities.

REFERENCES

- ¹ Centers for Disease Control and Prevention (2006). Youth Risk Behavior Surveillance, United States, 2005. Morbidity and Mortality Weekly Report, 55 (SS-5).
- ² Battistich, V., & Horn, A. (1997). The relationship between students' sense of their school as a community and their involvement in problem behaviors. *American Journal of Public Health*, 87(112), 1997-2001.
- ³ Bazron, B., Osher D., & Fleischman S. (2005). Creating Culturally Responsive Schools, *Educational Leadership*, 83-84.
- ⁴ Bonny, A. E., Vritto M.T., Klosterman, B.K., Hornung, R.W., & Slap, G.B. (2000). School disconnectedness: identifying adolescent risk. *Pediatrics*. 106(5):1017-1021.
- ⁵ McNeely, C.A., Nonnemaker J.M., & Blum, R. (2002). Promoting student connectedness to school: Evidence from the National Longitudinal Study of Adolescent Health. *Journal of School Health*, 72(4), 138-147.
- ⁶ National Research Council and the Institute of Medicine. (2004). Engaging schools: Fostering high school students' motivation to learn. Board on Children, Youth and Families, Division of Behavioral and Social Sciences and Education, Washington, DC: The National Academies Press.
- ⁷ Osterman, K.F., (2000). Students' need for belonging in the school community. *Review of Educational Research*, 7(2), 323-367.

NOTES
