

Mental health problems and treatment receipt among youths in Minnesota:

Data from 2007 Minnesota Student Survey

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Minnesota Department of **Human Services**
Performance Measurement and Quality Improvement Division
in cooperation with Children's Mental Health Division

By

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Insuring that each child has an optimal chance for a healthy start in life -- both physically and mentally -- is critical for the future health of our society. However, many children have mental health problems that interfere with normal development and functioning. In the United States, one in ten children and adolescents suffer from mental illness severe enough to cause some level of impairment.¹ Recognizing the potential for an emerging crisis, the U.S. Surgeon General called for improved surveillance of children's mental health.

In a recent report, the Minnesota Council of Health Plans estimated, based on claims data from its 2.5 million members, that nearly one in ten children and adolescents age 20 and younger in Minnesota had a mental health diagnosis.² The report also found that the most common diagnosis was attention-deficit/hyperactivity disorder followed by depression and anxiety.

This report examines the mental health problems among youths in Minnesota, using data from the 2007 Minnesota Student Survey (MSS). MSS is a statewide school-based survey conducted every three years for grades 6, 9 and 12 in public schools. While all the schools were invited, participation in the survey was voluntary for both school districts and students. In 2007, 308 out of 338 public school districts participated with a total of 136,549 students participating across three grades (72% of total enrollment of public schools). Since the data are not based on sample, but rather based on population, all the numbers reported are considered to be population values and do not need significance tests.

Table 1. Socio-demographic characteristics of survey participants.

		Grade 6 (n=49,081)	Grade 9 (n=50,713)	Grade 12 (n=36,755)	Total (n=136,549)
Gender	Female	49.6%	50.7%	50.4%	50.2%
Race/ethnicity	White	73.2%	77.3%	83.8%	77.7%
	American Indian	2.3%	1.4%	.8%	1.5%
	Black	6.0%	5.2%	3.7%	5.1%
	Hispanic	5.1%	3.8%	2.6%	3.9%
	Asian or Pacific Islander	5.5%	5.3%	4.7%	5.2%
	Mixed race/ethnicity*	7.8%	7.1%	4.4%	6.6%
Currently get a free or reduced-price lunch	Yes	29.5%	23.5%	17.1%	23.8%

*Those who selected more than one of the five racial/ethnic categories listed.

¹ U.S. Public Health Service. *Report of the Surgeon General's Conference on Children's Mental Health: A National Action Agenda*. Washington, DC: Department of Health and Human Services, 2000. <http://www.hhs.gov/surgeongeneral/topics/cmh/cmhreport.pdf>.

² Minnesota Council of Health Plans. *Minnesota's Mental Health*. February 2008.

About half of the students participating were females (50.2%) and this was similar across all three grades. Just under a quarter (23.8%) said that they were receiving free or reduced-price lunch at school (29.5% of 6th graders; 23.5% of 9th graders; 17.1% of 12th graders). More than three quarters (77.7%) were white while 5.2% were Asian/Pacific Islanders, 5.1% were black, 3.9% Hispanic, and 1.5% were American Indian. About 6.6% selected more than one of the five race/ethnicity categories. Overall, there were more minority students among younger students.

Table 2. Questions measuring mental health conditions with answering categories

Questions	Answering Categories
During the last 30 days...	5-point scale
have you felt you were under any stress or pressure?	Yes, almost more than I could take; Yes, quite a bit of pressure; Yes, more than usual; Yes, a little; No
have you felt sad?	All the time; Most of the time; Some of the time; A little of the time; None of the time
have you felt so discouraged or hopeless that you wondered if anything was worthwhile?	Extremely so, to the point that I have just about given up; Quite a bit; Some, enough to bother me; A little bit; Not at all
have you felt nervous, worried, or upset?	All the time; Most of the time; Some of the time; A little of the time; None of the time
How much do you agree or disagree with the following statements?	4-point scale
I get a lot of headaches, stomachaches or sickness I am often irritable and angry I have many fears and am easily scared I often have trouble concentrating I am restless and cannot stay still for long I often have trouble getting to sleep and staying asleep I do things before I think I am often unhappy, depressed or tearful	Agree; Mostly agree; Mostly disagree; Disagree

There were 12 items measuring mental health conditions in the 2007 MSS questionnaire (see Table 2). These items are adapted from established mental health screening tools, such as the Pediatric Symptom Checklist for Youth, the Strengths and Difficulties Questionnaire, and the MN Children’s Mental Health Interview Guide, encompassing various aspects of mental health, including mood, thinking, and behavior as well as impaired functioning. The inter-item reliability analysis showed a high level of reliability (Cronbach’s Alpha = .86). Each of the 12 questions was scored using either a five-point scale (0 through 4) or a four-point scale (0 through 3) in such a way that the higher the score, the higher the level of mental distress. Then the scores were summed to compute a mental health index score (0 through 40) for each respondent.

Female students, minority students and students from lower income households, compared to their counterparts, have higher scores on the mental health index, showing higher level of mental distress.

Table 3. Mean scores of mental health index by various socio-demographic variables

Variable	Mean score
Gender/Grade	
6 th grade male	12.4
6 th grade female	13.7
9 th grade male	12.0
9 th grade female	16.1
12 th grade male	12.1
12 th grade female	15.4
Race/Ethnicity	
White	13.2
Black	13.9
Hispanic	14.4
Asian/Pacific Islander	14.9
American Indian	15.8
Multiple race/ethnicity	15.9
Currently receive a free/reduced-price lunch	
Yes	15.3
No	13.2

Table 3 shows the mean scores of the mental health index across various socio-demographic variables. Across all three grades, female students had a higher mean score than their male counterparts (The overall mean score was 15.1 for females compared to 12.2 for males). The difference was more pronounced among 9th and 12th graders, with female students in grades 9 and 12 showing higher scores than their male counterparts. Male students did not show much difference across grades. Minority students, especially American Indians and those with a mixed racial/ethnic background, showed higher scores

on the mental health index compared to whites. Students receiving free or reduced price lunch at school also showed higher mean scores on the mental health index compared to those who did not receive free/reduced-price lunch.

Students were asked if they hurt themselves on purpose or tried to kill themselves during the past year. Overall, 10.9% reported hurting themselves on purpose and 2.9% reported suicidal attempts during the past year. About 13% of 9th graders, followed by 6th graders (10%) and 12th graders (8%) hurt themselves on purpose while 3.7% of 9th graders, 2.4% of 12th graders and 2.1% of 6th graders reported suicidal attempts during the past year. More males than females among 6th graders, and more females than males among 9th and 12th graders reported hurting themselves on purpose. While there was not much gender difference among 6th and 12th graders, 9th grade females were twice more likely than 9th grade males to report suicidal attempt (4.9% vs. 2.4%).

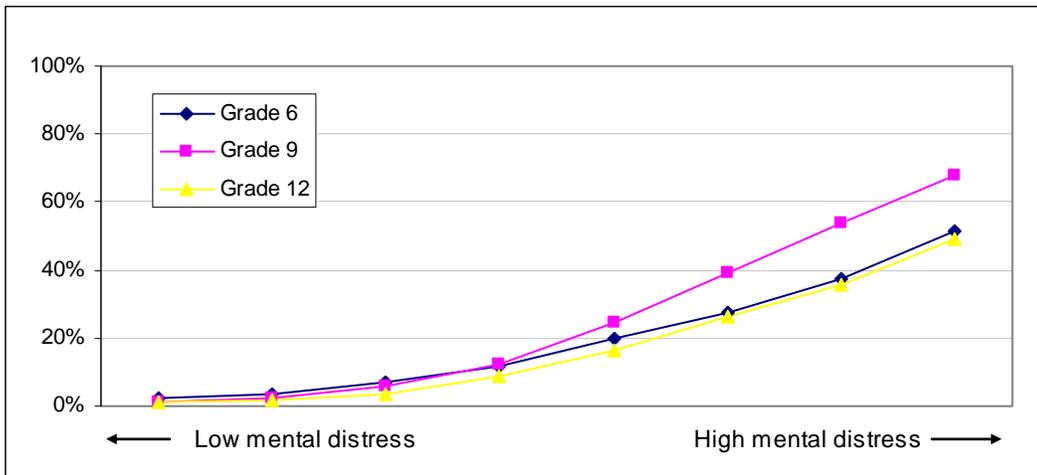


Figure 1. Hurting oneself on purpose during past year by the level of mental distress

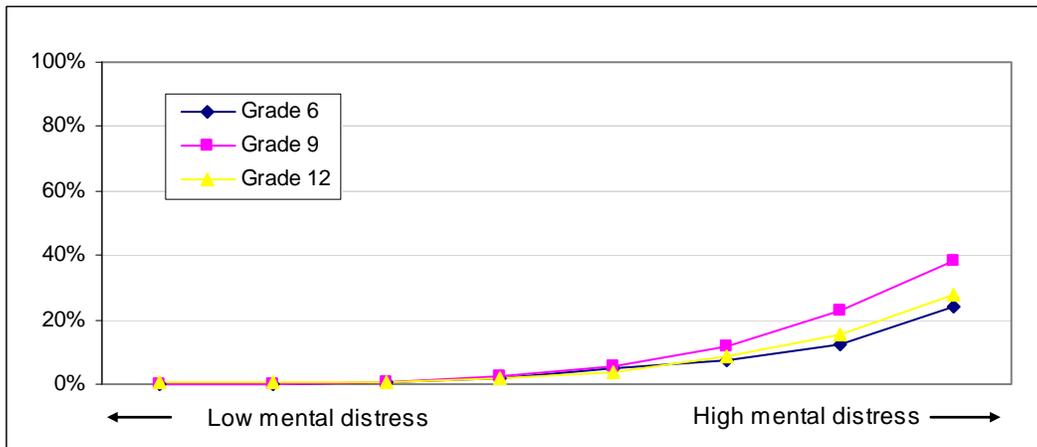


Figure 2. Suicidal attempts during past year by the level of mental distress

The two charts (figures 1&2) show the relationship between the level of mental distress and two behavioral indicators for mental health problems: hurting oneself on purpose and suicidal attempts during the past year. Across all three grades, the higher the level of mental distress a student has, the more likely s/he would be involved in such behaviors. This relationship was more pronounced among 9th graders than the other grades. That is, compared to the other grades at the same level of mental distress, students in 9th grade were more likely to report these behaviors.

Female students and minorities (especially American Indians and students who selected more than one racial/ethnic category) as well as students from lower income households are more likely to be at risk of mental illness than their counterparts.

In an effort to illuminate some risk and protective factors in relation to youth mental health, this report compares two groups of students: those at risk of mental illness during the past year and all others. To incorporate not only the current level of mental distress, but also other relevant indicators during the past year, three criteria were used in defining the group: mental health index score, past year suicide attempts and past year mental health treatment history. If a student scored 28 or higher on the mental health index, had tried to kill her or himself during the past year, or had been treated for a mental or emotional health problem during the past year, s/he was defined as being “at-risk of mental illness.” This division, however, is not diagnostic in any sense. When we talk about mental health of children and adolescents, it is critical to keep in mind that they are “still developing” and “actively adapting” as they go through periods of developmental transition and reorganization. Their mental health and illness should be viewed from this developmental context. Readers should keep in mind that normal and abnormal developmental processes, especially among children and adolescents, are often separated only by differences of degree.

Overall, 11.6% of students who participated in the survey were estimated to be at risk of mental illness during the past year. Female students were more likely to be at risk of mental illness than their male counterparts (14.4% vs. 8.7%). While this pattern holds for each grade, the gender difference was more pronounced among older students than those in grade 6 (Figure 3). Compared to 6th graders, 9th and 12th graders were more likely to be at risk of mental illness (7.3%, 14.2% and 13.4% respectively).

Minority students were more likely to be at risk of mental illness compared to white students (Figure 4). American Indian students had the highest proportion being at risk of mental illness (19%), followed by students with a mixed racial/ethnic background (18%). In addition, household income level was related to the likelihood of being at risk of mental illness. About 15.9% of the students who received free or reduced-price lunch at school were at risk of mental illness, compared to 10.4% of the others (Figure 5).

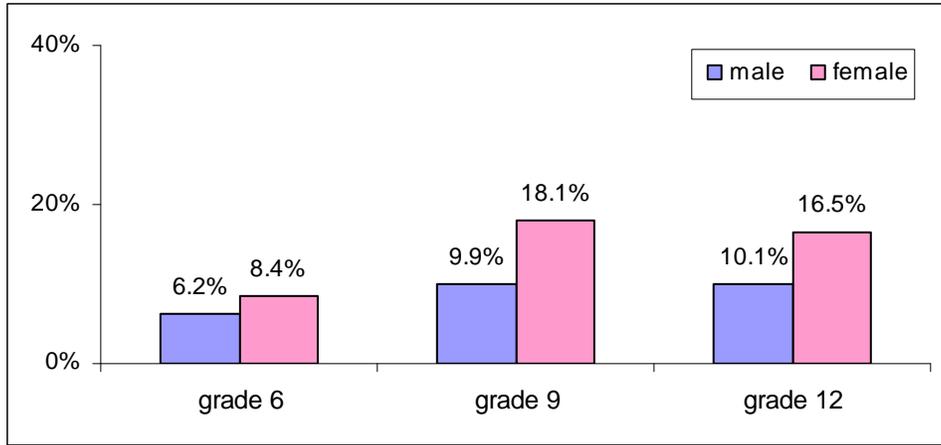


Figure 3. Students at risk of mental illness by grade/gender

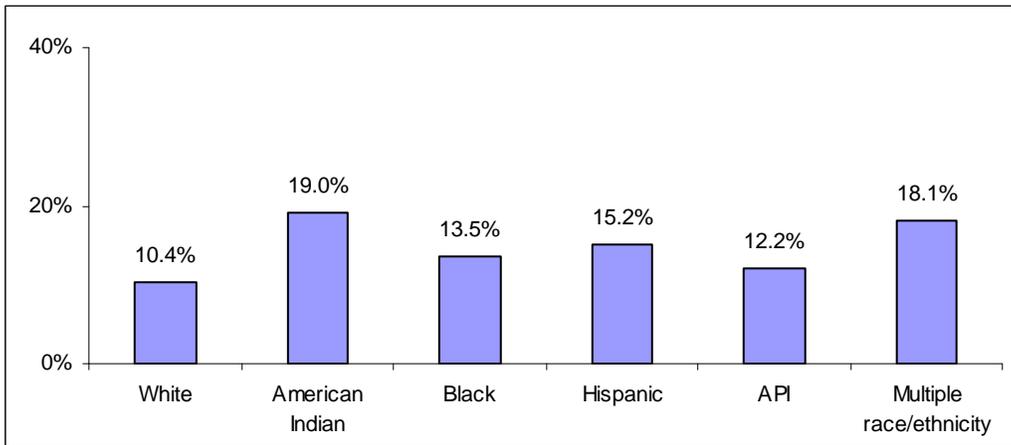


Figure 4. Students at risk of mental illness by race/ethnicity

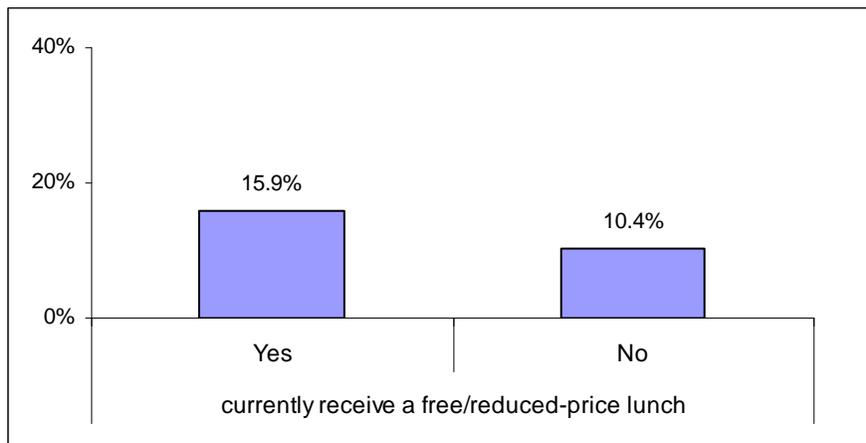


Figure 5. Students at risk of mental illness by household income

Other factors that are related with an increased likelihood of being at risk of mental illness include not living with both biological parents; unable to talk with parents about problems; substance use related problems of a family member; exposure to violence; and not feeling cared for.

Other environmental factors, such as family structure, communication with parents, substance use related problems by family, being bullied or abused, and feeling cared for by friends and adults are examined in relation to being at risk of mental illness.

A majority of the students (61%) reported that they lived with both biological parents with an additional 15% living with mother only and 9% living sometimes with mother, sometimes with father. As figure 6 shows, students living with both biological parents were less likely to be at risk of mental illness compared to those with any other family structure (8.5% vs. 16.4%).

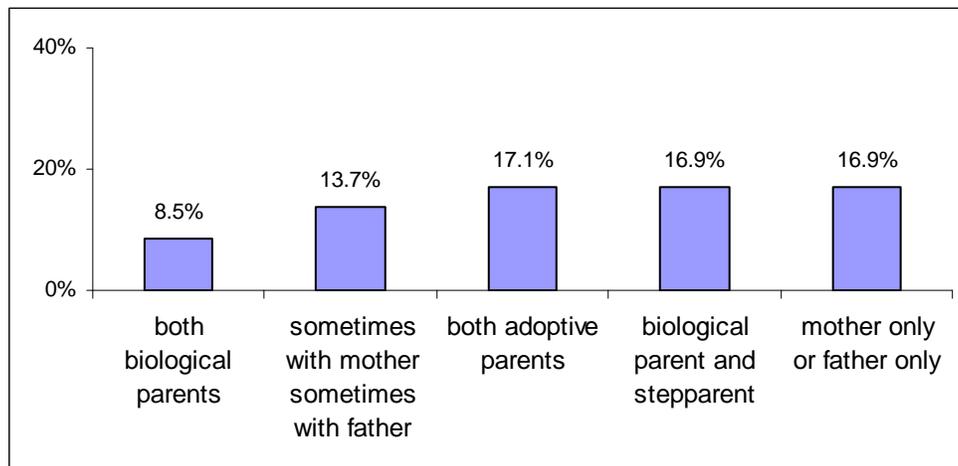


Figure 6. Students at risk of mental illness by family structure

While a majority of students (54%) said that they could talk to their mothers most of the time about problems they had, only about 36% said so about their fathers. On the other hand, about 4% said that they could not talk to their mothers about problems at all while 7% said so about their fathers. If students could talk to their parents about problems, they were a lot less likely to be at risk of mental illness (Figure 7). Compared to those who said that they could talk to their parents about problems most of the time, students who said “not at all” were more than four time more likely to be at risk of mental illness (31.7% vs. 7.7% in case of mothers; 27% vs. 6.5% in case of fathers).

Substance use related problems of family members were asked separately for alcohol and drug: “Has alcohol [drug] use by any family member repeatedly caused family, health, job,

or legal problems?” About 17% of the students said that their family member’s substance use repeatedly caused problems, and these students were about three times more likely to be at risk of mental illness compared to those who did not have such a problem (Figure 8).

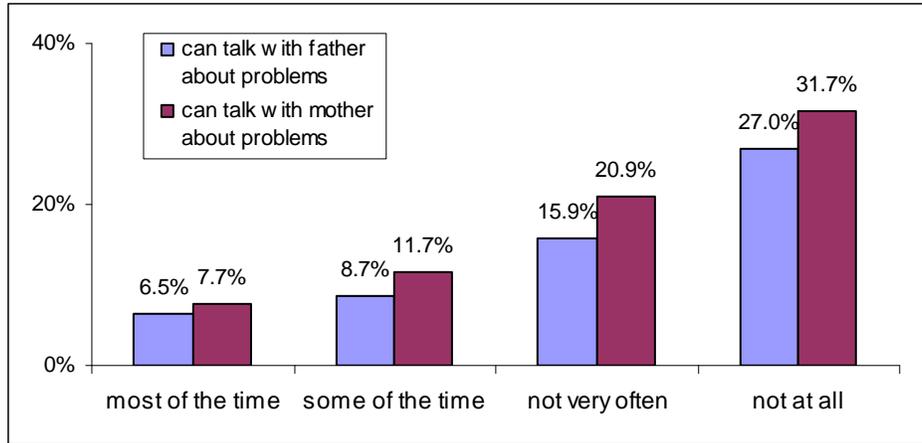


Figure 7. Students at risk of mental illness by being able to talk with parents about problems

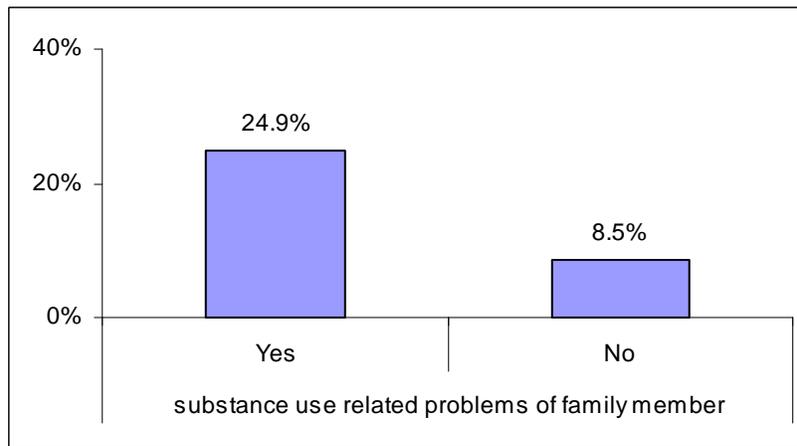


Figure 8. Students at risk of mental illness by substance use related problems of family member

Students were asked “During the last 30 days, how often has another student or group of students made fun of or teased you in a hurtful way, or excluded you from friends or activities?” While a majority (57.9%) said never, more than one in four students (28.7%) had such an experience once or twice during the past 30 days, and an additional 13.6% were being bullied once a week or more often during the past 30 days. As figure 9 shows, compared to those who said “never,” students who were being bullied once a week were about three times more likely to be at risk of mental illness (20.9% vs. 7.4%) and the

likelihood increases more than five times for those being bullied everyday (40.3% vs. 7.4%).

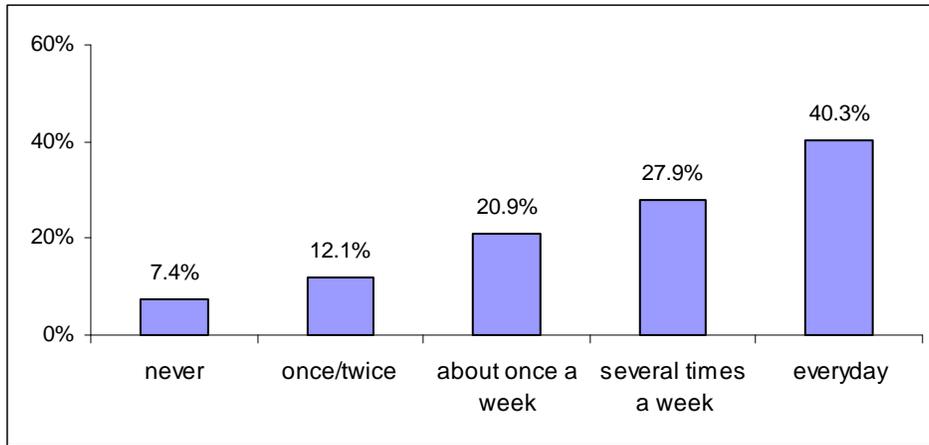


Figure 9. Students at risk of mental illness by being bullied

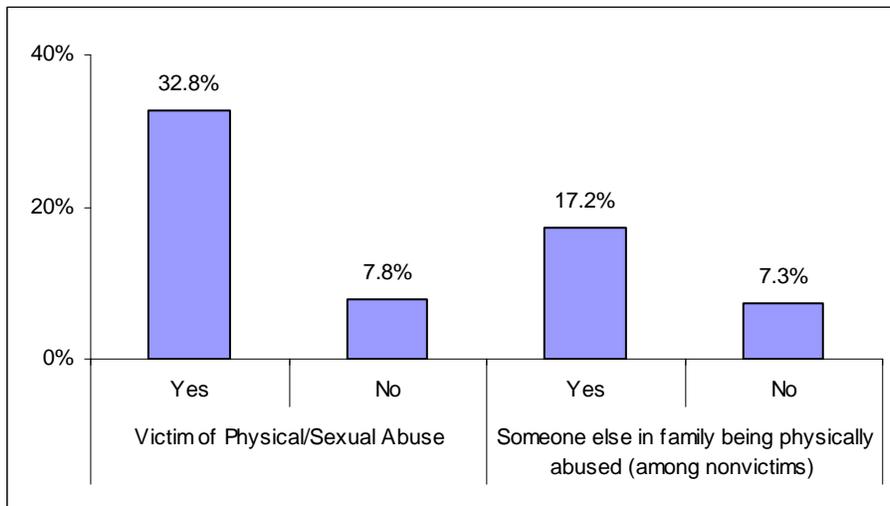


Figure 10. Students at risk of mental illness by being abused

Physical abuse was measured by asking “Has any adult in your household ever hit you so hard or so often that you had marks or were afraid of that person?” Sexual abuse was asked by two questions: “Has any older or stronger member of your family ever touched you sexually or had you touch them sexually?”; “Has any adult or other person outside the family ever touched you sexually against your wishes or forced you to touch them sexually?”

Overall, 14.6% reported being abused either physically or sexually: About one in ten students (10.4%) was physically abused and about one in seven students (6.4%) experienced sexual abuse. Students who were abused either physically or sexually were

about four times more likely to be at risk of mental illness than their counterparts (Figure 10). In addition, students were asked “Has anyone in your family ever hit anyone else in the family so hard or so often that they had marks or were afraid of that person?” Among those who were not abused physically or sexually, 5.2% said “yes” to this additional question, and they were more than twice as likely to be at risk of mental illness as those who said “no” (17.2% vs. 7.3%). That is, even though they were not victims of an abuse themselves, having someone in the family who was physically abused by another family member increased the likelihood of having a mental illness.

Finally, students were asked “How much do you feel friends [parents/teachers or other adults at school] care about you?” More than three quarters (82%) answered that they felt their parents cared very much, 38.7% said so about friends and only 17.7% said so about teachers or other adults at school. On the other hand, 1.3% of the students felt that their parents did not care at all; 1.9% said so about friends and 5.3% about teachers or other adults at school.

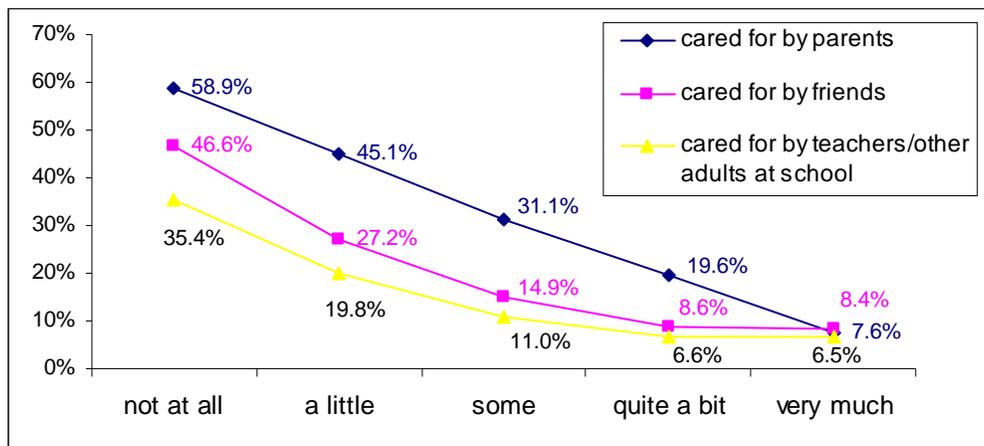


Figure 11. Students at risk of mental illness by feeling cared for by parents, friends, or other adults

The more a student feels being cared by parents, friends or teachers, the less likely s/he would be at risk of mental illness (Figure 11). More than half (58.9%) of those who felt their parents did not care at all about them were at risk of mental illness, compared to 7.6% of those who felt that their parents cared about them very much.

One more thing to notice in Figure 11 is the subtle difference in the pattern of relations across reference groups (parents vs. friends vs. teachers/other adults at school). The relationship was quite linear between the likelihood of being at risk of mental illness and feeling cared for by parents while it was curvilinear in the case of friends or teachers. Thus, in case of parents, there was still substantial difference in the likelihood of being at risk of mental illness between those who felt cared for ‘quite a bit’ and those who felt cared for ‘very much’ (20% vs. 8%), while there was virtually no difference between feeling cared for ‘quite a bit’ and feeling cared for ‘very much’ by friends or teachers (8.6% vs. 8.4% for

friends; 6.6% vs. 6.5% for teachers/other adults at school), virtually eliminating the difference across the three reference groups. Adolescents with a strong attachment with parents, friends, or teachers/other adults seem to have a high level of resilience to mental illness, and the relationship with parents seem to be more critical for students' mental health than the relationship with other groups.

To examine all the factors together, a multivariate logistic regression analysis was conducted with all the socio-demographic variables and other environmental factors as independent variables and being at risk of mental illness (1=yes; 0=no) as a dependent variable. The full list of factors and their odds ratios are reported in the appendix. Of all the factors, being a 12th grade female, being a 9th grade female, being bullied once a week or more often during the past 30 days, and being a victim of physical or sexual abuse were the top four most influential factors in predicting the likelihood of being at risk of mental illness. When the regression analysis was conducted with the mental health index scores as dependent variable instead of the dichotomous variable, these four variables also came up as the top four factors in predicting the mental health score.

Students who are at risk of mental illness, compared to the others, are more likely to smoke, drink, or use marijuana; more likely to ride with friends under the influence of alcohol/drugs; more likely to get involved in violent behaviors; more likely to have sex; and less likely to use a condom when they have sex.

This section examines various health risk behaviors, such as smoking, drinking and illicit drug use as well as violent and sexual behaviors in relation to being at risk of mental illness.

Overall, 12% of the students smoked a cigarette; 23% drank an alcoholic beverage; and 9% used marijuana during the past month. Compared to those who were not at risk of mental illness, students with a risk of mental illness were three times more likely to smoke a cigarette during the past month (30% vs. 10%); about twice more likely to drink an alcoholic beverage during the past month (42% vs. 21%); and about three times more likely to use marijuana during the past month (22% vs. 8%). In addition, among those who used each substance, students with a risk of mental illness were more likely to use it on 10 days or more during the past month compared to those without a risk of mental illness (9.0% vs. 16.5% for cigarette; 47.1% vs. 54.2% for alcohol; 32.9% vs. 36.8% for marijuana).

Students in grades 9 and 12 were also asked “Do you ever ride with friends after they have been using alcohol or drugs?” About three in ten students in 9th and 12th grades said that they did ride with such a friend. Students with a risk of mental illness, compared to those without such a risk, were more likely to ride with a friend who was under the influence of alcohol or drugs (43.7% vs. 24.2% said either “Yes, but rarely” or “Yes, often”), and they

were more likely to ride “often” with a friend who was under the influence of alcohol or drugs (14.9% vs. 5.6%).

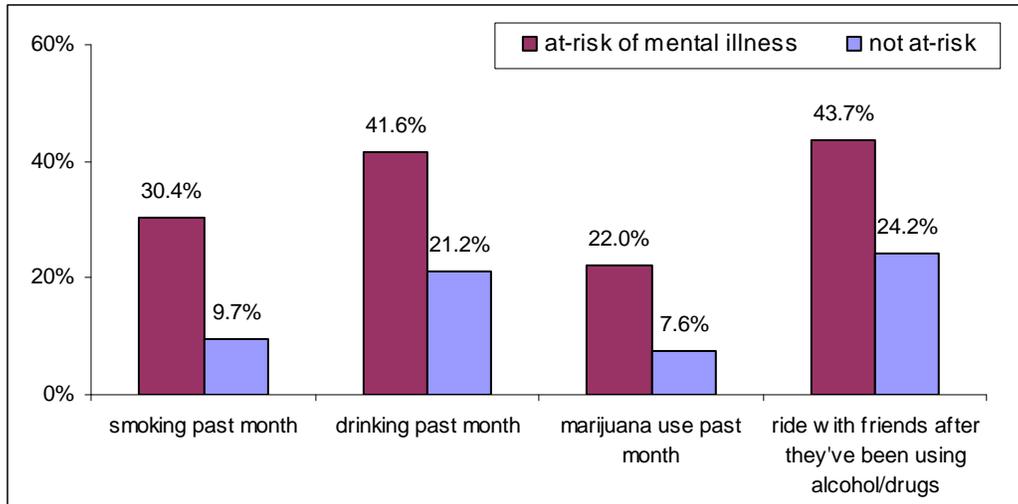


Figure 12. Prevalence of substance use by mental health status.

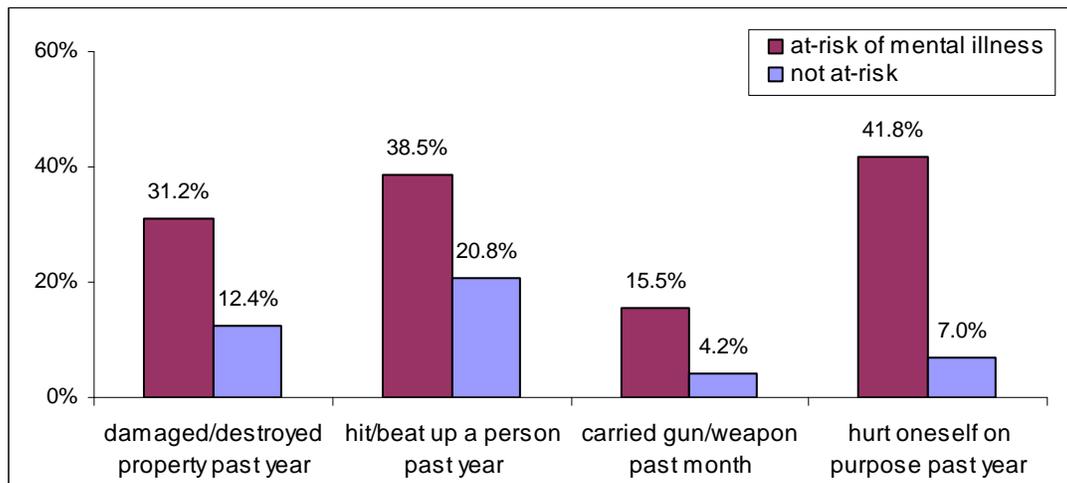


Figure 13. Prevalence of violent behaviors by mental health status.

Students with a risk of mental illness were more likely to be involved in various violent behaviors compared to those without such a risk (Figure 13). For example, they were more likely to have damaged or destroyed property at school or somewhere else during the last 12 months (31% vs. 12%); more likely to have hit or beat up another person during the last 12 months (39% vs. 21%); more likely to have carried a gun or other weapon on school property during the last 30 days (16% vs. 4%). In addition, students who were at risk of mental illness were about 6 times more likely to have hurt themselves on purpose during the last year, compared to those who were not at risk, (42% vs. 7%).

Sexual behavior related questions were asked only to 9th and 12th graders. About 32% of the students said that they had sexual intercourse (19% of 9th graders; 49% of 12th graders). About 12.6% of students who were at risk of mental illness, compared to 8.1% of those who were not at risk, said that they had sexual intercourse. More importantly, among those who had sex, those at risk of mental illness were less likely to use a condom: When asked “The last time you had sexual intercourse, did you or your partner use a condom?” 43.1% of those who were at risk of mental illness said “No” compared to 33.3% among those who were not at risk.

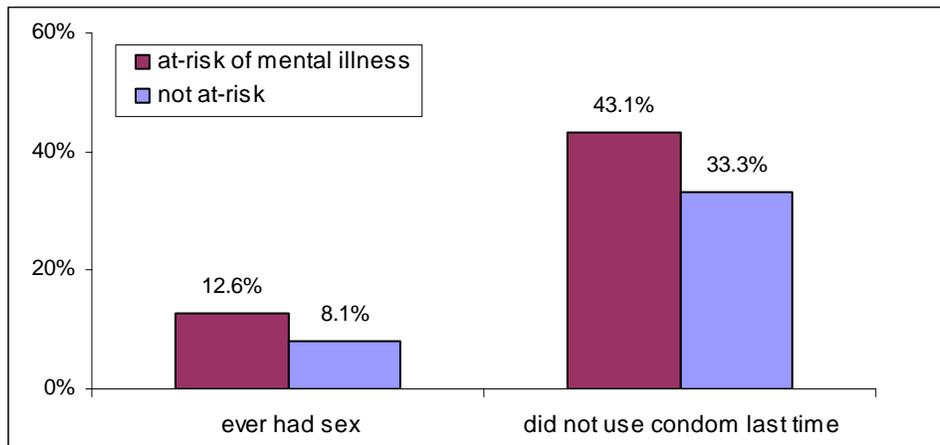


Figure 14. Prevalence of sexual behaviors by mental health status.

Among those who were at risk of mental illness, minority students and students from lower income households were less likely to receive treatment than their counterparts; males were more likely to receive treatment than females among 9th graders, but females had a higher treatment rate than males among 12th graders.

Students in grades 9 and 12 were asked if they have been treated for a mental or emotional health problem. This section examines the receipt of treatment for mental health problems among the students who were at risk of mental illness during the past year. To control for the differences in the prevalence of mental health problems across various sub-groups, the analyses for this section was conducted only for the students who were at risk of mental illness during the past year as defined in this report. Students in grade 6 were not asked about treatment history, so they were excluded from the analyses.

Among those who were at risk of mental illness, 53.9% received treatment during the last year and 46.1% did not receive treatment. Overall, male students with a risk of mental

illness than their female counterparts were more likely to have received treatment during the past year (56.0% vs. 52.7%), and 12th graders than 9th graders were more likely to have received treatment during the past year (60.9% vs. 48.9%).

When gender and grade were examined together, an interesting interaction appeared.³ Among 9th graders who were at risk of mental illness, male students were more likely to have received treatment than their female counterparts. Among 12th graders, on the other hand, female students were more likely to have received treatment than their male counterparts (Figure 15). To examine this further, two multivariate logistic regressions were conducted separately for males and females who were at risk of mental illness with treatment receipt during the past year as dependent variable and grade, race/ethnicity, and household income as independent variables (see Appendix for detailed results). The results showed that the increase in treatment receipt rate from grade 9 to grade 12 was significant among female students (46.0% to 62.9%; odds ratio=1.875; p=.000), but not among male students (54.7% to 57.6%; odds ratio=1.067; p=.348). It appears that among 9th graders, more males than females have received treatment during the past year, but the treatment receipt among 12th grade significantly increases from grade 9 among females while it does not increase as much among male students.

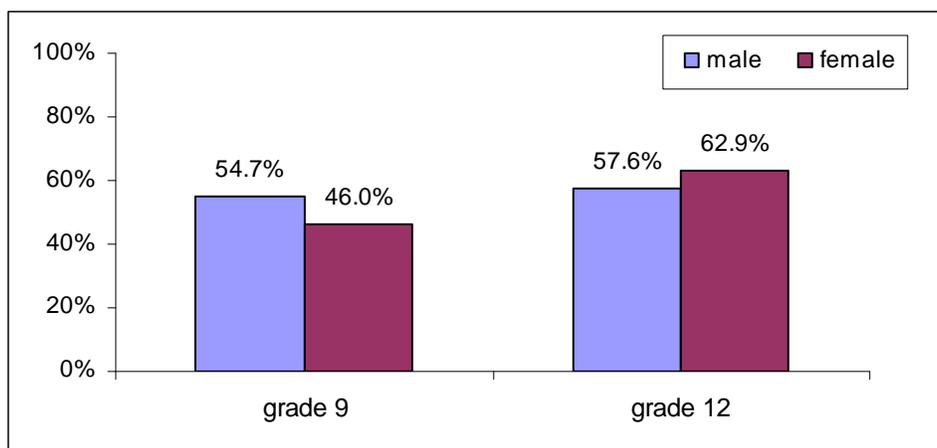


Figure 15. Receipt of treatment among those with a risk of mental illness by grade and gender.

Minority students who were at risk of mental illness were less likely than their white counterparts to have received treatment during the past year (Figure 16). In fact, white students were the only racial/ethnic group whose treatment receipt rate was higher than the statewide rate. Asian/Pacific Islanders showed the lowest rate of treatment receipt with only 30.8% who were at risk of mental illness having received treatment during the past year. In addition, among those who were at risk of mental illness, students who were

³ Multivariate logistic regression analysis was conducted among those at risk of mental illness with gender, grade, race/ethnicity, household income, and an interaction term (gender by grade), and the interaction term was found significant with an odds ratio of 1.770 (p=.000).

receiving a free or reduced-price lunch at school were less likely than the others to have received treatment for mental health problems (Figure 17).

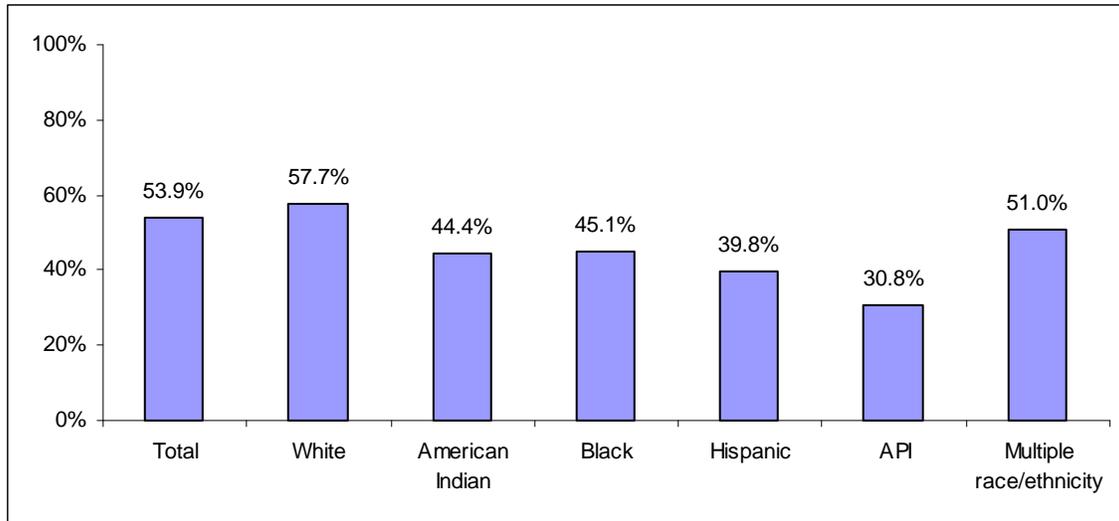


Figure 16. Receipt of treatment among those with a risk of mental illness by race/ethnicity.



Figure 17. Receipt of treatment among those with a risk of mental illness by household income.

Multivariate logistic regression analysis was conducted to examine gender, grade, race/ethnicity, and household income together in predicting treatment receipt during the past year. The results confirmed what was observed above: Controlling for treatment need, minorities compared to whites, and those from lower income household in contrast to their more affluent counterparts are less likely to have received treatment for mental health problems (see appendix for detailed results of regression).

In summary, this report found that 11.6% of students in grades 6, 9 and 12 in Minnesota public schools were at risk of mental illness. Mental disorders and mental problems appear in families of all social, economical, and cultural backgrounds. No one is immune. Yet, there are some youths who are at greater risk by virtue of a broad array of factors. This report indicated that female students in Minnesota had higher levels of emotional distress than male students. Compared to 6th graders, students in grades 9 and 12 were almost twice as likely to be at risk of mental illness. Minority students, especially American Indians, Hispanics, and students with a mixed racial/ethnic background, were more likely than whites to be at risk of mental illness. Other risk factors include having lower household income, not living with both biological parents, not being able to talk with parents about problems, having substance use related problems by a family member, being exposed to violence through being bullied or witnessing/being the victim of physical or sexual abuse, and feeling not cared for by friends, parents, teachers and other adults.

Among these socio-demographic and other environmental factors, being a 12th grade female, being a 9th grade female, being bullied once a week or more often, and being a victim of physical/sexual abuse were the top four most influential factors in predicting the likelihood of being at risk of mental illness.

Students at risk of mental illness were more likely to get involved in various health risk behaviors, such as smoking, drinking and using illicit drugs. Not only did they use these substances, but they also used them more often than those who were not at risk of mental illness. Other risk behaviors that these students get involved in more than their counterparts include riding with friends after they have been using alcohol or drugs, various violent behaviors (beating up a person, carrying a gun or other weapon, hurting themselves on purpose, or trying to kill themselves), and having sex without using a condom. It is worth noting that even at a comparable level of emotional distress, students in grade 9, especially female students, were more likely to be involved in risky behaviors, such as hurting themselves on purpose and trying to kill themselves, compared to those in other grades.

Treatments for mental health problems are expensive and may not be available to all who need them. The findings in this report indicated that more than two out of five students (46%) who were at risk of mental illness did not receive treatment during the past year. Minority students and students from low income households were less likely to get treatment than their counterparts. These disparities in the receipt of treatment for mental illness become even more critical if we consider the fact that the need for treatment is greater among minority students and those from low income households.

**– Appendix –
Multivariate logistic regression results**

Likelihood of being at risk of mental illness

Dependent variable: Being at risk of mental illness (1=yes; 0=no)		
Factors (reference category)	Odds Ratio	95% CI
Gender/Grade (male in grade 6)		
Female in grade 6	1.524	1.37-1.69
Male in grade 9	2.008	1.82-2.22
Female in grade 9	4.095	3.74-4.49
Male in grade 12	2.384	2.15-2.65
Female in grade 12	4.539	4.12-5.00
Race/ethnicity (white)		
American Indian	1.464	1.22-1.76
Black	.873	.76-1.00
Hispanic	1.254	1.11-1.42
Asian/Pacific Islander	.953	.86-1.06
Mixed race/ethnicity	1.232	1.13-1.35
Not at all can talk with mother about problems (all the other categories)	1.508	1.41-1.62
Not at all can talk with father about problems (all the other categories)	1.380	1.25-1.52
Living with both biological parents (all the others)	1.269	1.21-1.33
Currently get a free/reduced-price lunch at school	1.110	1.05-1.18
Bullied once a week or more often during the past 30 days	3.261	3.08-3.46
Feel not at all cared for by friends	2.428	2.11-2.80
Feel not at all cared for by teachers/other adults at school	1.603	1.46-1.76
Feel not at all cared for by spiritual leaders	1.457	1.37-1.55
Feel not at all cared for by other adults in community	1.386	1.29-1.49
Feel not at all cared for by parents	1.919	1.60-2.31
Feel not at all cared for by other adult relatives	1.187	1.02-1.39
Physical/sexual abuse victim	3.149	2.98-3.33
Someone else in family being physically abused	1.668	1.51-1.84
Have alcohol/drug use related problems by a family member	1.846	1.75-1.95

Treatment receipt among students who are at risk of mental illness

Dependent variable: Having been treated for a mental or emotional health problem during the past year (1=yes; 0=no)			
Factors (reference category)		Odds Ratio	95% CI
Gender (male)	Female	.877	.81-.95
Grade (9)	grade 12	1.535	1.42-1.66
Race/ethnicity (white)			
	American Indian	.713	.54-.94
	Black	.706	.58-.86
	Hispanic	.567	.46-.70
	Asian/Pacific Islander	.370	.30-.45
	Mixed race/ethnicity	.871	.76-.99
Currently get a free/reduced-price lunch at school		.711	.65-.78

Treatment receipt among **male** students who are at risk of mental illness

Dependent variable: Having been treated for a mental or emotional health problem during the past year (1=yes; 0=no)			
Factors (reference category)		Odds Ratio	95% CI
Grade (9)	grade 12	1.067	.93-1.22
Race/ethnicity (white)			
	American Indian	.541	.34-.86
	Black	.895	.66-1.21
	Hispanic	.580	.41-.81
	Asian/Pacific Islander	.376	.27-.52
	Mixed race/ethnicity	.798	.63-1.01
Currently get a free/reduced-price lunch at school		.807	.69-.94

Treatment receipt among **female** students who are at risk of mental illness

Dependent variable: Having been treated for a mental or emotional health problem during the past year (1=yes; 0=no)			
Factors (reference category)		Odds Ratio	95% CI
Grade (9)	grade 12	1.875	1.70-2.07
Race/ethnicity (white)			
	American Indian	.835	.60-1.17
	Black	.559	.43-.74
	Hispanic	.572	.44-.74
	Asian/Pacific Islander	.361	.28-.46
	Mixed race/ethnicity	.919	.78-1.08
Currently get a free/reduced-price lunch at school		.668	.60-.75