

## Measures that Matter Data Brief: Children and Youth with Special Health Care Needs in Minnesota

# In Their Own Words: Results from the Minnesota Student Survey 2010

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### Background

The Minnesota Student Survey is conducted every three years and asks 6<sup>th</sup>, 9<sup>th</sup> and 12<sup>th</sup> grade students about activities, experiences and behaviors. Beginning in 1998, a question was added to the Minnesota Student survey which would identify students with a physical or mental health condition that had lasted or was expected to last at least 12 months. Analysis that year and in the ensuing years indicated tremendous disparities in the experiences of students with health conditions compared to their healthy peers. The students with special needs experienced more violence, both at home and at school, had a much less positive view of school, and were much more likely to express sadness, stress, having suicidal thoughts and suicide attempts. In 2007, the single question was changed to two separate questions – one on the presence of a physical health condition and another on the presence of a mental health condition. While this change is very helpful in providing information on the similarities and differences among subgroups of students with various health conditions compared to healthier peers, it precludes the ability to provide trend information before 2007.

The data presented in this brief do not represent the entirety of the results of the Minnesota Student Survey 2010. It is important to remember that this analysis indicates whether variables are associated with each other, but it does not demonstrate that one variable causes or predicts the other.

### Demographics

In 2010, 130,908 students completed the survey; 49.8% of the respondents were male, 50.2% were female. 23,654 (18.1%) students in grades 6, 9, and 12 reported having a physical health condition, a mental health condition or both. (Figure 1)

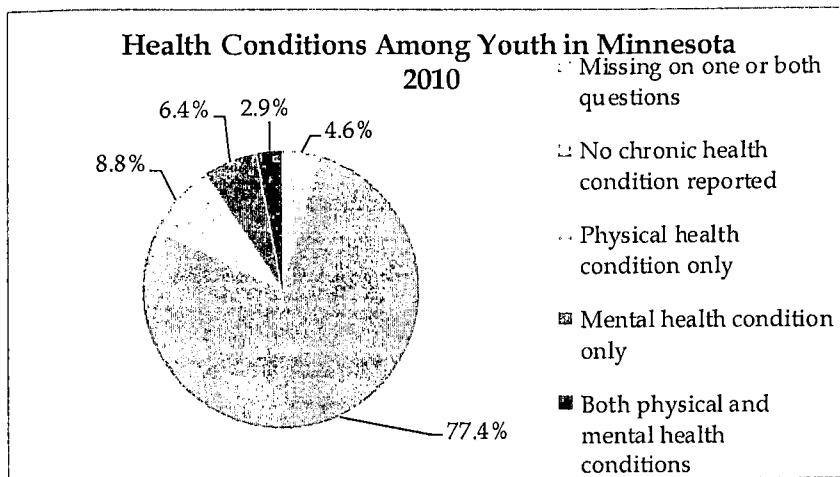


Figure 1 Percent of Students With and Without Health Conditions

It should be noted that boys in 9<sup>th</sup> and 12<sup>th</sup> grade were more likely than girls to miss either or both of the questions

A higher percent of females have any health condition than do males. (55.3% v. 44.7%).

Overall, the percentage of students reporting a health condition increases with age, (16.5%, 18.8% and 19.1% in 6<sup>th</sup> 9<sup>th</sup> and 12<sup>th</sup> grades respectively).

### Trends in Health Conditions 2007-2010

Analysis comparing the responses individually (i.e. "Do you have a physical health condition...." / "Do you have a mental health condition") between years reveals a decrease in the percentage of males with a physical health condition between 2007 and 2010 regardless of grade level. Mental health conditions remained unchanged over time although 12<sup>th</sup> grade remains higher than 6<sup>th</sup> grade. (Figure 2)

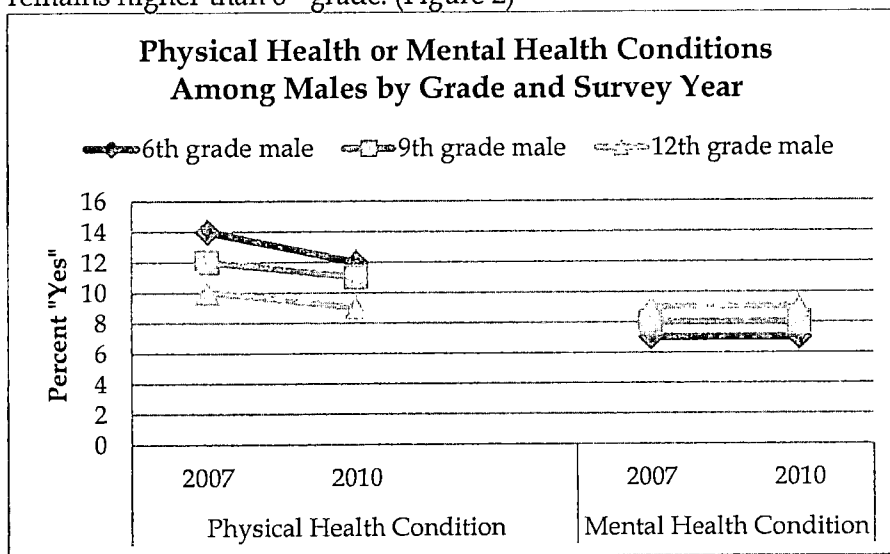


Figure 2 Health Conditions: Males by Grade 2007 - 2010

Among females, there was a decrease in the percentage of 6<sup>th</sup> and 9<sup>th</sup> graders with physical health conditions between 2007 and 2010 and a decrease in the percentage of 9<sup>th</sup> and 12<sup>th</sup> graders with mental health conditions between 2007 and 2010. (Figure 3)

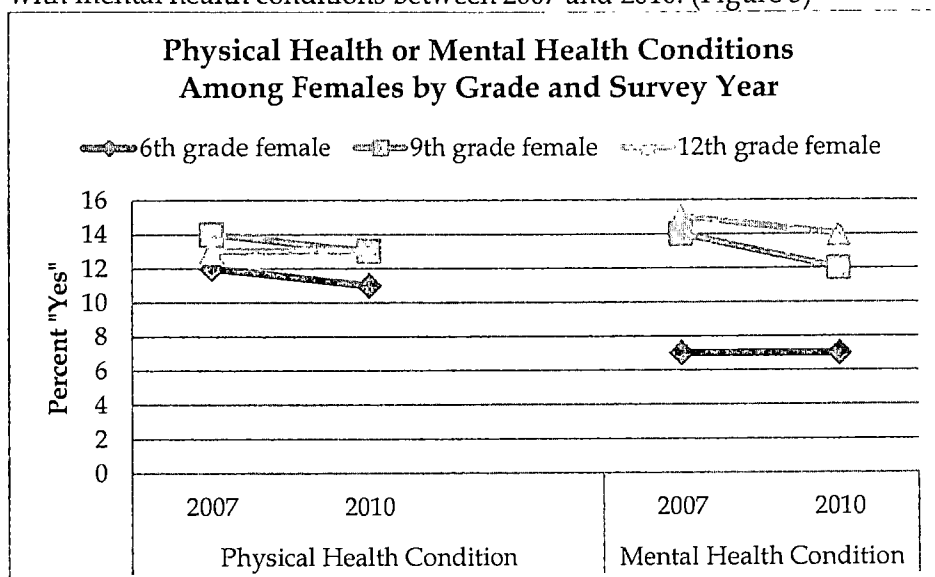


Figure 3 Health Conditions: Females by Grade 2007-2010

## Race / Ethnicity

The table below describes the percent of all respondents by race or ethnicity, the percent of those with health conditions by race or ethnicity, and the percent with a health condition within each race or ethnicity.

Race / Ethnicity	% of All Respondents (n=130,908)	% of those respondents with health conditions only (n=23,654)	% within Race/Ethnicity with a health condition
American Indian	1.5%	1.9%	25.0%
Black, African or African American	5.2%	5.4%	19.7%
Hispanic or Latino	4.3%	3.5%	15.3%
Asian American	5.2%	3.5%	12.8%
White	73.0%	70.9%	18.4%
Mixed Race	6.7%	9.8%	27.9%

Table 1 Health Conditions by Race/Ethnicity

## Adults in Household

Sixty percent of respondents live with two biological/adoptive parents. Students with any special need are less likely than their healthy peers to live with two either biological or adoptive parents.

Students whose conditions are physical in nature are more likely to reside with two biological or adoptive parents than those with any emotional/mental health condition regardless of gender or grade.

Health Condition Status	Two Parent (bio/adoptive)	2 parent / one step parent	mother only	all others
Neither Physical or Mental Health Cond	63.9	6.1	14.4	15.6
Physical Health Condition only	60.3	6.8	15.8	17.1
Mental Health Condition only	48.1	10.1	20.1	21.7
Both Physical and Mental Health Cond	47.6	9.1	21.4	21.9
<b>ALL</b>	<b>62.0</b>	<b>6.6</b>	<b>15.1</b>	<b>16.3</b>

Table 2 Adults in Household by Health Status

## Free and Reduced-Price Lunch

33,233 (27.5%) of the survey respondents receive free or reduced price lunches. Of those who receive free or reduced price lunches, 21.9% are students who have a physical or mental health condition or both. Nearly 40% of the students with both a mental health and physical health condition receive free or reduced price lunches.

## Having had an Individualized Education Plan (IEP) (9<sup>th</sup> and 12<sup>th</sup> grades only)

Nearly 16% of all students report having or ever having an IEP. Students without health conditions are the least likely to have ever had an IEP (14.2%) and students with both mental health and physical health conditions are the most likely to have ever had an IEP (28.9%). (Table 3) Regardless of health status, boys are significantly more likely than girls to have had an IEP.

Percent of Student Who Have Ever Had an IEP	
Neither Physical or Mental Health Condition	14.20%
Physical Health Condition only	18.10%
Mental Health Condition only	25.10%
Both Physical and Mental Health Condition	28.90%

Table 3 Having an IEP by Health Status

## Perceptions of School Environment

### Teacher Respect for Students

Students with health conditions as a group are about as likely as their peers without health conditions to report all or most of the teachers show respect for students. students with mental health conditions or with both physical and mental health conditions are less likely to report all or most of their teachers show respect for students. (Figure 4) This is the case regardless of grade or gender.

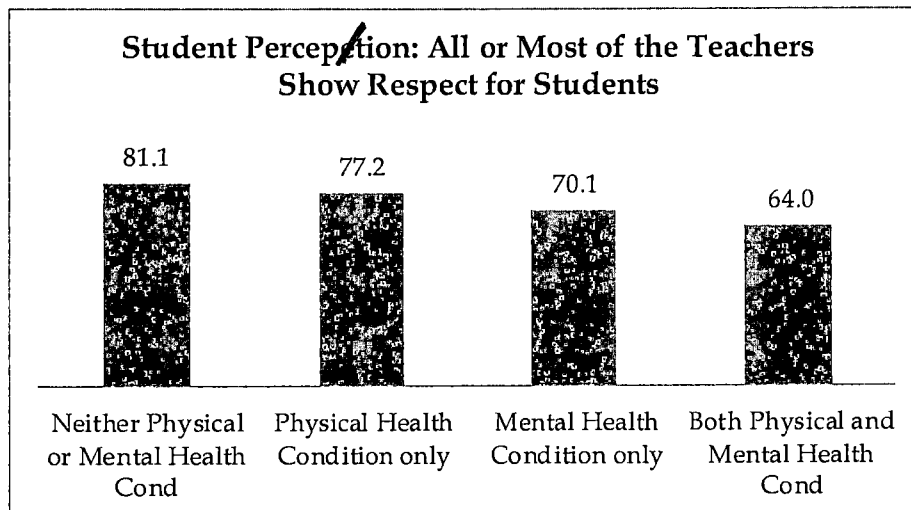


Figure 4 Teacher Respect for Students by Health Status

### Teachers Interested in Student as a Person

Students with health conditions are less likely to report that all or most of their teachers are interested in them as a person. (Figure 5) 44.1% of students with any condition perceive that teachers are interested in them as a person versus 51.0% of students without any health condition.

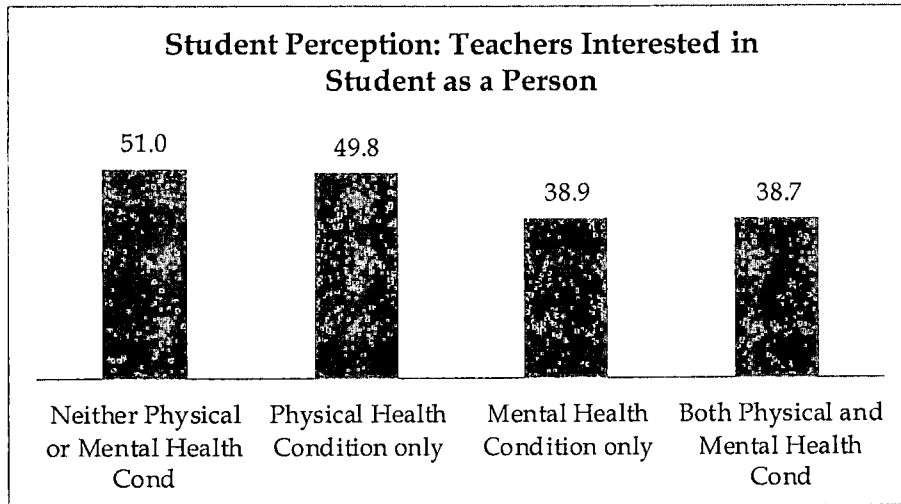


Figure 5 Teachers Interested in Student as a Person

### Friendliness of Students

Overall, students with any type of health condition (49%) are less likely than those without a health condition (63.0%) to agree that most or all of the students in their schools are friendly. Regardless of grade or gender, healthy students are more likely to find other students friendly compared to their same grade / same gender peers who have one or both health conditions. (Figure 6)

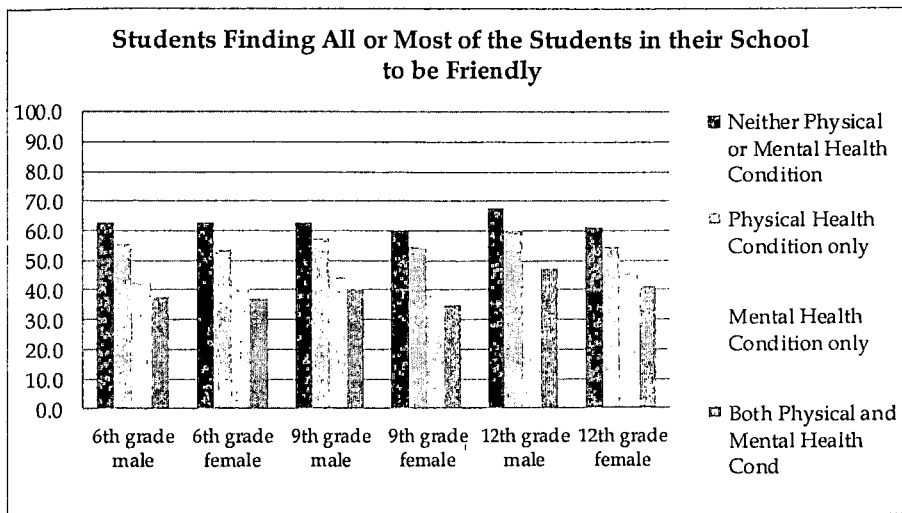


Figure 6 Friendliness of Other Students by Health Status

### Victimization at School

Students with any kind of special need experience verbal threats and physical violence at higher rates than their healthy peers, with students having both physical and mental health conditions experiencing victimization at the highest rates. (Figure 7) Female students with health conditions are more likely to experience unwanted sexual comments than their male peers. Students with both physical and mental health conditions experience sexual touching, grabbing or pinching at rates far exceeding their same-grade, same gender peers. (data not shown)

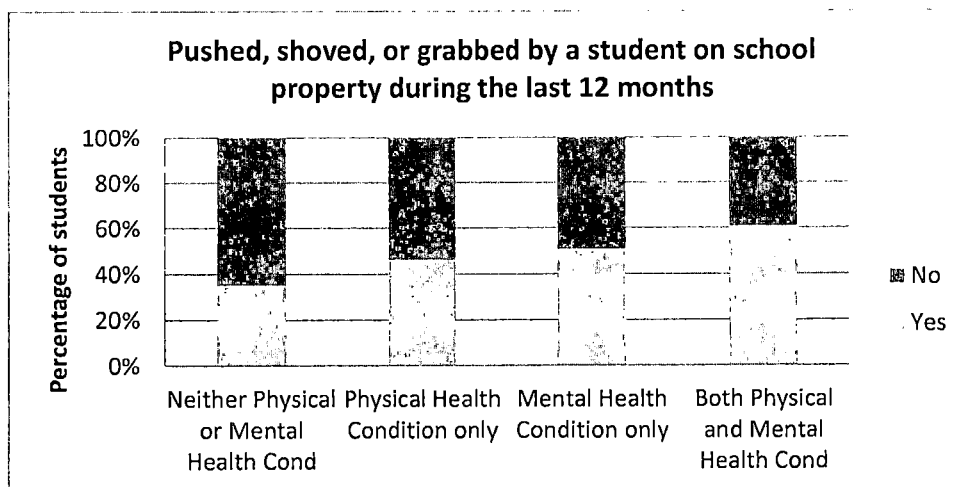


Figure 7 Physical Violence at School by Health Status

## Bullying

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?"

60% of students without chronic health conditions responded they haven't bullied in the last 30 days. About half of the students with physical health conditions only haven't been bullied. About 40% of students with mental health conditions only haven't been bullied. Only one-third of students with both mental health and physical health conditions haven't been bullied in the last 30 days. (Figure 8)

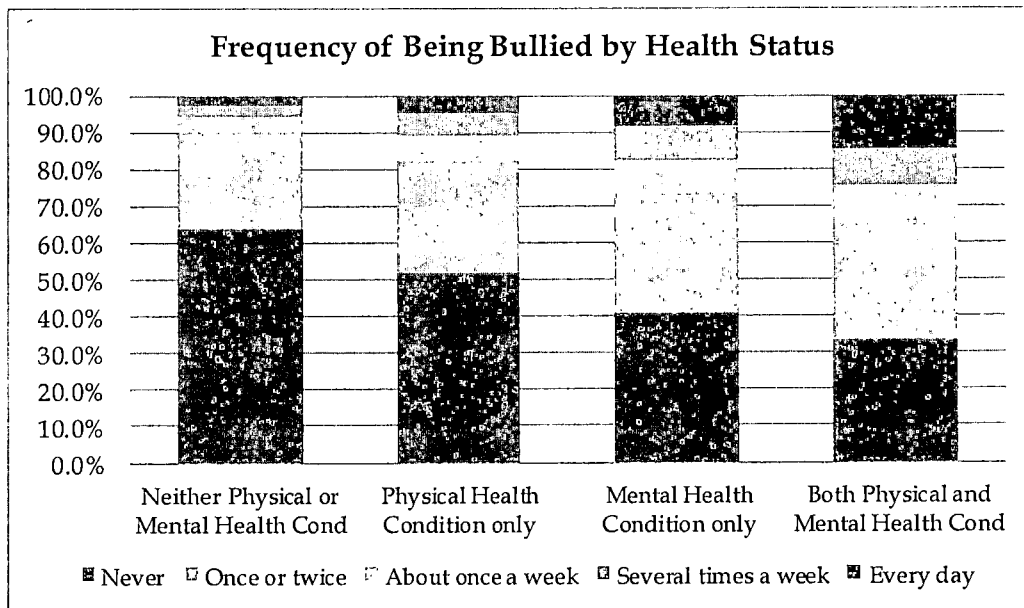


Figure 8 Frequency of Being Bullied by Health Status



For those students experiencing bullying every day to several times a week, it is clear that health status makes a difference within same grade, same gender peers. (Figure 9)

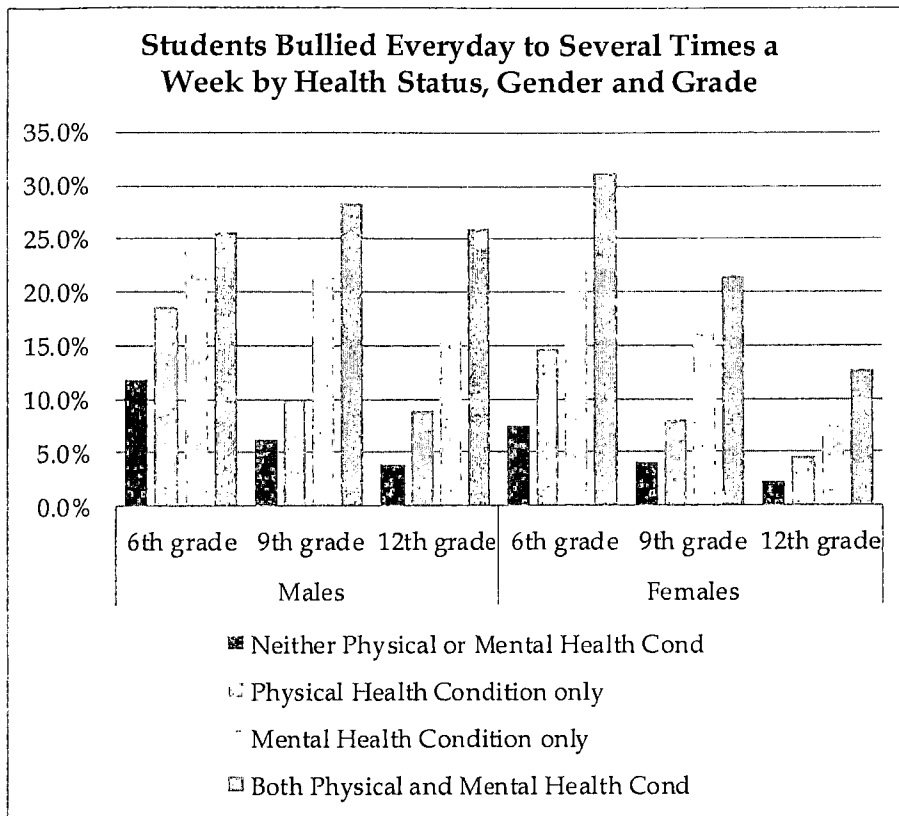


Figure 9 Being bullied daily or several times per week by health status, grade and gender

Students were then asked, “During the last 30 days, how often have you, on your own or as part of a group, made fun of or teased another student in a hurtful way or excluded another student from friends or activities?”

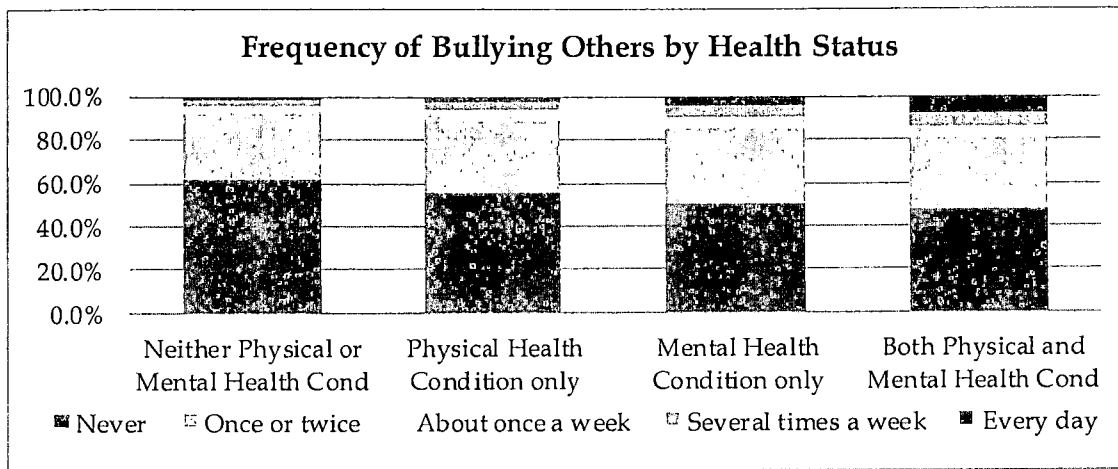


Figure 10 Frequency of Bullying Others by Health Status

More than 60% of the students without a health condition responded they had not bullied someone else in the last 30 days. 55% of the students with physical health conditions responded they had not bullied someone else. 50.5% of the students who had a mental health condition only had not bullied someone else and 47.5% of those students with both a mental and physical health condition had not bullied someone else in the last 30 days. (Figure 10)

Over the student population as whole, 5.2% bully others every day or several times a week. 9<sup>th</sup> grade males (23.9%) and 12<sup>th</sup> grade males (22.3%) having both mental health and physical health conditions are much more likely than any other groups to bully others every day or several times a week. (Figure 11)

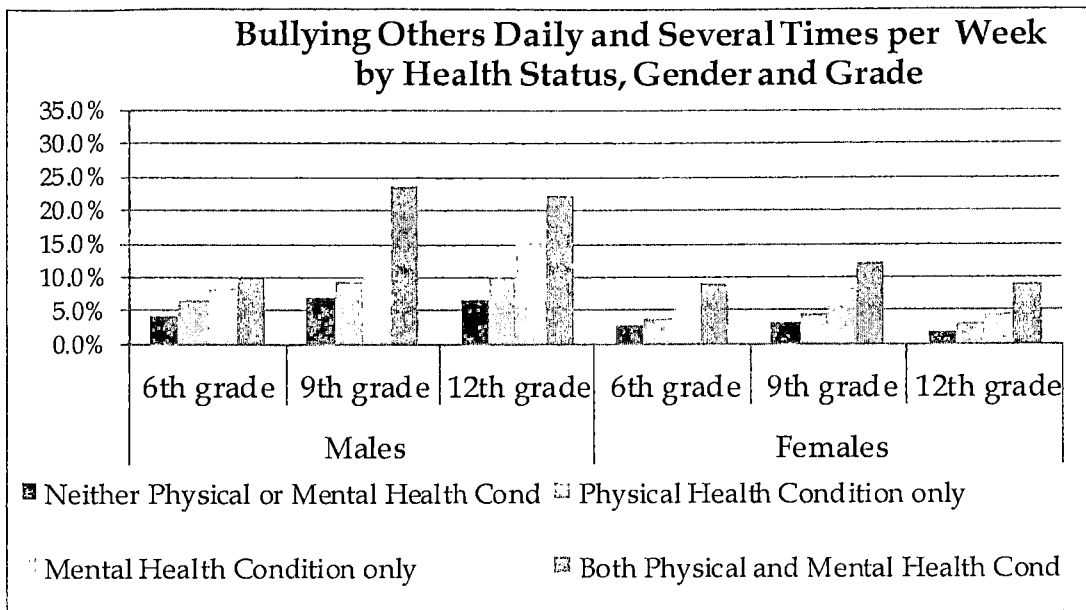


Figure 11 Bullying Others Daily or Several Times a Week by Health Status, Gender and Grade

## HEALTH

### Last Physical

Overall, students with any health condition are as likely as those without such conditions to have had a physical within the last two years. (83.3% v. 83.4%).

### Body Mass Index (9<sup>th</sup> and 12<sup>th</sup> grades only)

Body Mass Index (BMI) is a number calculated from a child's self-reported weight and height. BMI can be used as a screening tool to identify possible weight problems for children and teens. The BMI number is calculated using a standard formula. BMI-for-age percentiles are used to interpret BMI numbers because, unlike adults, BMI is both age- and sex-specific for children and teens. The CDC BMI-for-age growth charts take into account these differences and allow translation of a BMI number into a percentile for a child's sex and age. The CDC growth charts were used to determine weight status according to BMI for participants in the Minnesota Student Survey. Not overweight: Less than the 85th percentile. Overweight: 85th to less than the 95th percentile. Obese: Equal to or greater than the 95th percentile.

Overall, nine percent of students can be considered obese based on body mass index. (8.4% of students without a health condition v 11.7% of students with ANY or both health conditions). Table 4 describes the percentage of students who meet the CDC criteria for obesity by gender, grade and health condition.

Percent of Students with a Body Mass Index at or above the 95th percentile by Grade, Gender and Health Status				
	Males		Females	
	9th Grade	12th Grade	9th grade	12th grade
Neither Physical or Mental Health Cond	11.3%	12.4%	4.8%	4.8%
Physical Health Condition only	14.0%	15.1%	7.1%	6.6%
Mental Health Condition only	16.9%	15.7%	8.9%	10.3%
Both Physical and Mental Health Cond	22.4%	22.6%	9.0%	11.4%

Table 4 Students with a BMI Greater Than or Equal to the 95th Percentile

### Emotional Well-being

More than forty percent of students with both physical and mental health conditions felt they had been under almost more stress or pressure than they could take in the 30 days preceding the survey compared to less than 10% of students with no health conditions, 15% of those whose conditions were physical conditions only and 33% of those with mental health conditions only. (Figure 12) This pattern is true regardless of grade or gender with the stress levels peaking in 9<sup>th</sup> grade for both males and females with both physical and mental health conditions (42.6% males/50.8% females feeling almost more pressure than they could take).

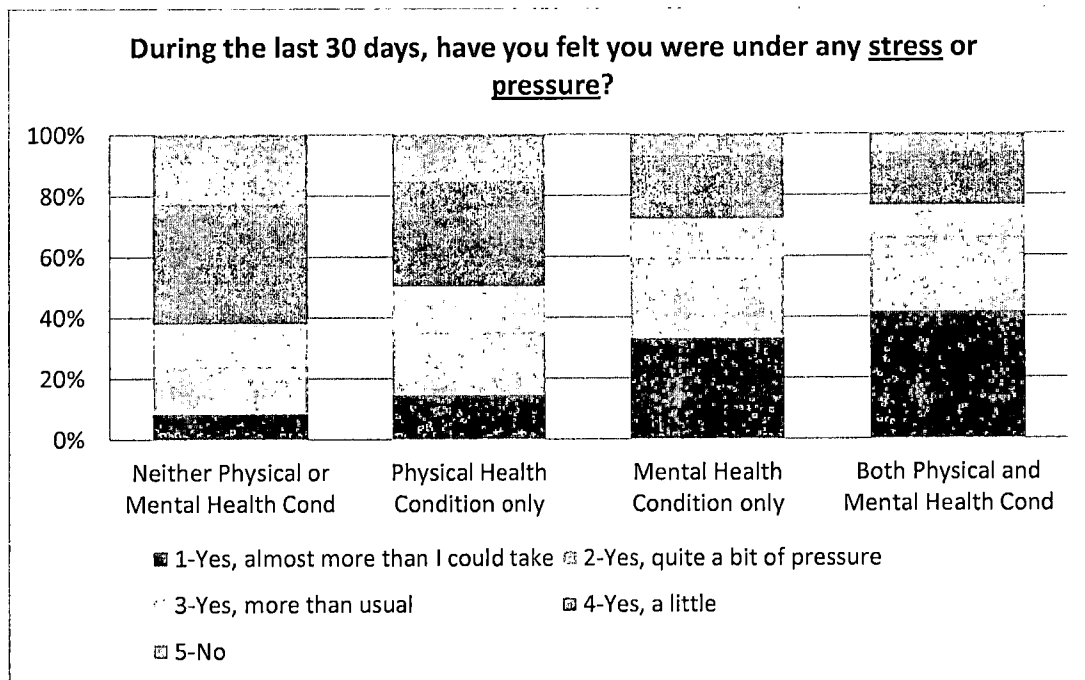


Figure 12 Levels of Stress by Health Status

Having a physical health condition increases the likelihood of feelings of discouragement, worry and sadness nearly 2 times relative to healthy peers. Having a mental health condition increases the likelihood of feelings of discouragement, worry and sadness more than 5 times relative to healthy peers. Having both a physical and a mental health condition increases the likelihood of feelings of discouragement, worry and sadness 7-10 times relative to healthy peers.

### Suicidal Thoughts and Behaviors

The presence of a mental health condition is strongly associated with a student having had *thoughts* about killing themselves with 60% of those with a mental health condition by itself or in conjunction with a physical condition ever having had suicidal thoughts – 41.6% more than a year ago and 17.8% in the last year. (Figure 13)

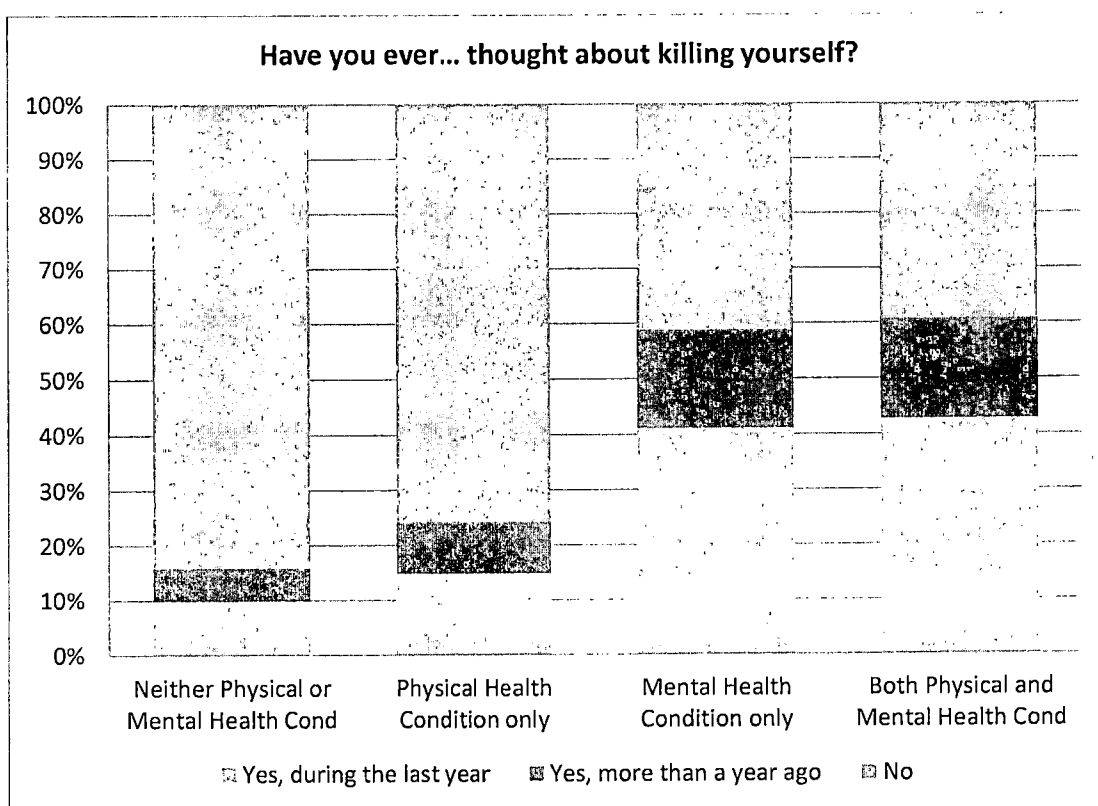


Figure 13 Students Having Thought About Killing Themselves by Health Status

Having a physical health condition, mental health condition or both increases the likelihood that a student would have tried to kill himself or herself. Table 5 describes actual suicide attempts by grade, gender and health status. The association of the presence of a mental health condition and ever having attempted suicide is clear.

Percent of Students Who Have Ever Tried to Kill Themselves by Grade, Gender and Health Status						
	Males			Females		
Health Status	6th Grade	9th Grade	12th Grade	6th Grade	9th Grade	12th Grade
Neither Physical or Mental Health Cond	2.6%	3.0%	3.6%	2.3%	4.0%	4.0%
Physical Health Condition only	4.6%	5.0%	6.2%	4.3%	6.3%	6.1%
Mental Health Condition only	12.1%	20.6%	25.5%	14.6%	29.6%	25.5%
Both Physical and Mental Health Cond	17.1%	27.6%	35.3%	17.6%	39.4%	31.5%

Table 5 Suicide Attempts by Gender, Grade and Health Status

## Date and Family Violence and Sexual Abuse

### Date Violence and Abuse

Youth with special health care needs are at particularly high risk for victimization from physical and sexual violence and abuse.<sup>i ii</sup> This violence and abuse has immediate and long-term consequences. Children who have been abused at home are more likely to have learning difficulties, more likely to be victimized as adults or become victimizers themselves.

Ninth and twelfth grade students were asked if someone they were going out with ever hit, hurt, threatened or made them feel afraid. Over the population in its entirety, 8.6% responded in the affirmative.

Students with both physical and mental health conditions were most likely to have experienced date violence (30%) than those with physical or mental health conditions alone and those with no health conditions (10.8%, 20.1% and 6.4% respectively). (Figure 14) These disparities based on health status are the case regardless of grade or gender. Females were at twice the risk of violence as males at either grade level.

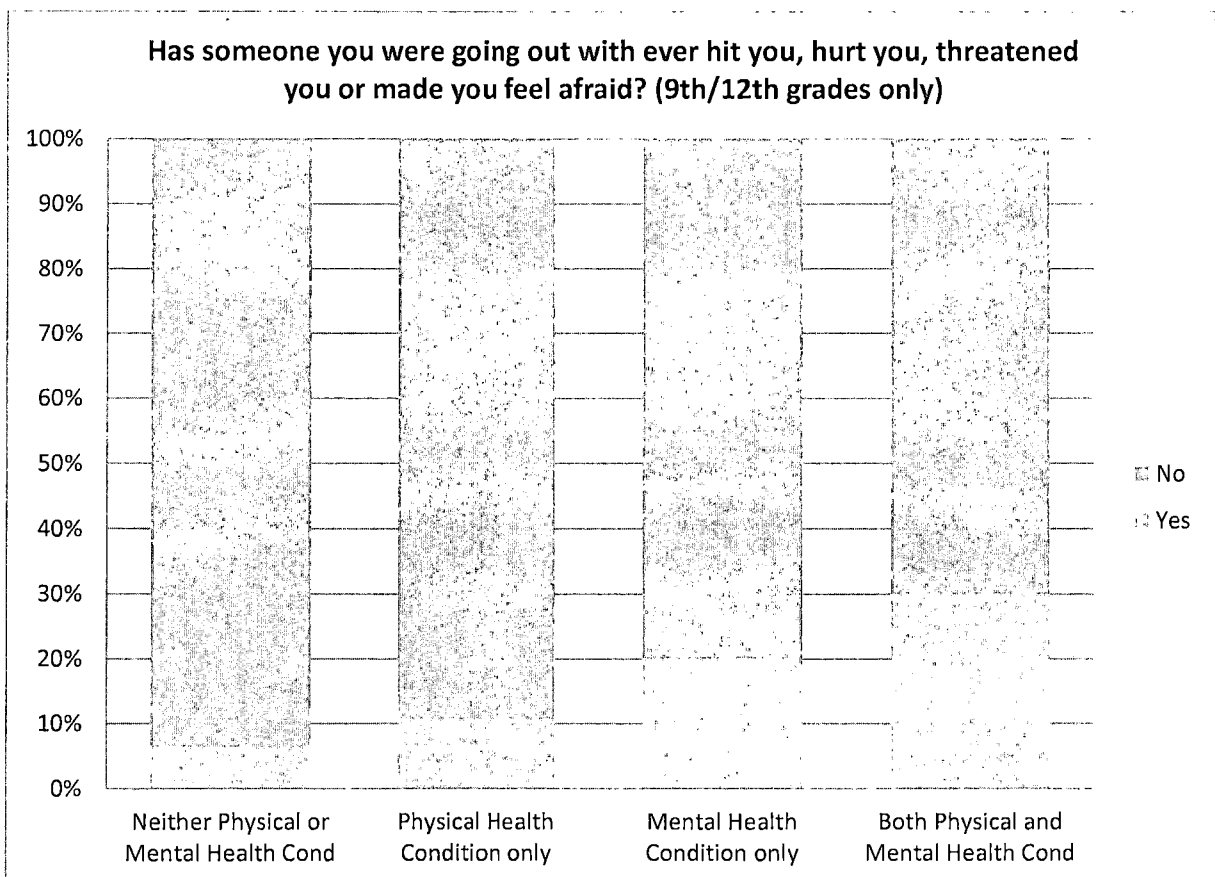


Figure 14 Having Been the Victim of Date Violence or Threats by Health Status

Ninth and twelfth grade students were asked if someone they were going out with ever forced them to have sex or do something sexual when they didn't want to. Over the entire population of 9th and 12<sup>th</sup> graders, 7.5% responded "yes". As with date violence, students with both mental health and physical health conditions were the most likely to experience unwanted sexual contact (26.1%) followed by those with mental health conditions only (17.7%), physical health conditions only (9.3%) and those without physical or mental health conditions (5.6%). (Figure 15) Regardless of grade or gender, the disparities based upon the presence or absence of a health condition were present. As with date violence, females had two times more likely than males for forced sexual contact.

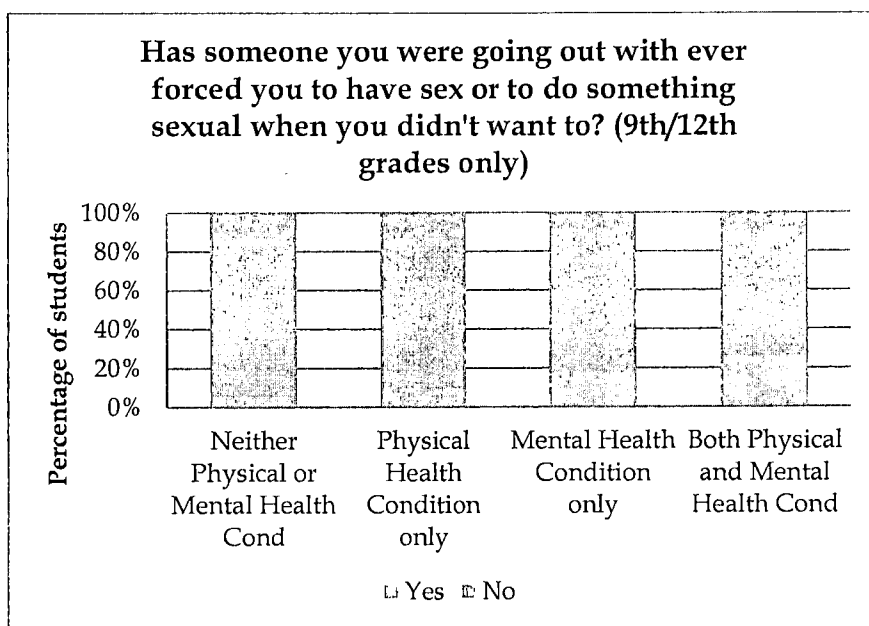


Figure 15 Forced Sexual Contact by Health Status

Ninth and twelfth grade students were asked, "Have you ever physically or sexually hurt someone you were going out with?" Over the population, 3.2% responded "yes". Students with both physical and mental health conditions were the most likely (12.6%), followed by those with a mental health condition only (8.0%), those with physical health conditions (3.9%) with students having neither health condition being the least likely to have initiated date violence (2.3%). Disparities based on the presence or absence of any health condition remains regardless of grade or gender. However, the magnitude of the disparity varies by gender. (Table 6)



Percentage of 9th and 12th graders Initiating Date Violence by Grade and Gender				
	9 <sup>th</sup> Grade		12 <sup>th</sup> Grade	
	Male	Female	Male	Female
Neither Physical or Mental Health Condition	1.7%	2.0%	2.5%	3.3%
Physical Health Condition only	3.3%	3.2%	5.2%	4.5%
Mental Health Condition only	5.6%	7.2%	9.3%	9.8%
Both Physical and Mental Health Condition	13.8%	9.4%	19.0%	11.7%

Table 6 Students Initiating Date Violence by Grade, Gender and Health Status

#### Non-Familial Sexual Abuse

Students were asked, “Has any adult or other person outside the family ever touched you sexually against your wishes or forced you to touch them sexually?” Across the student population, 4.8% responded in the affirmative.

Within each grade and gender grouping, those with both a physical and a mental health condition are most likely to have responded ‘yes’ (range = 9.1% for 6<sup>th</sup> grade males with both conditions to 27.8% for 9<sup>th</sup> grade females with both conditions.) (Table 7)

Percentage of Students Experiencing Sexual Abuse by a non-Family Member by Health Status, Grade and Gender						
	6 <sup>th</sup> grade male	6 <sup>th</sup> grade female	9 <sup>th</sup> grade male	9 <sup>th</sup> grade female	12 <sup>th</sup> grade male	12 <sup>th</sup> grade female
Neither Physical or Mental Health Condition	2.3%	3.6%	1.8%	5.4%	1.8%	5.3%
Physical Health Condition only	4.6%	6.9%	3.6%	10.1%	4.1%	9.1%
Mental Health Condition only	6.2%	13.6%	6.1%	19.3%	9.8%	16.9%
Both Physical and Mental Health Condition	9.1%	18.9%	16.0%	27.8%	20.4%	22.0%

Table 7 Sexual Abuse by Non-Family Members by Health Status, Grade and Gender

#### Family Violence and Sexual Abuse

There is little difference in percentages of students having witnessed family violence (Figure 16) and the percentage having been the victim of family violence. (Figure 17) Students with health conditions are from 1.4 to 6.2 times more likely than same grade/gender peers without health conditions to have been victims of family violence. Within each grade and gender grouping, students with both mental health and physical health conditions are the most likely to have

been victims of family violence followed by those with mental health conditions alone and then those with physical health problems.

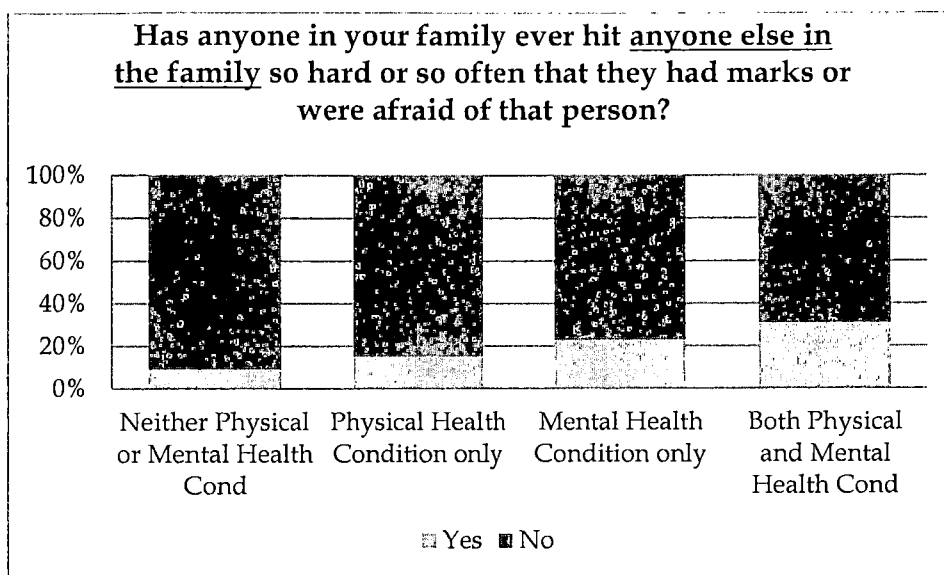


Figure 16 Witnessing Family Violence by Health Status

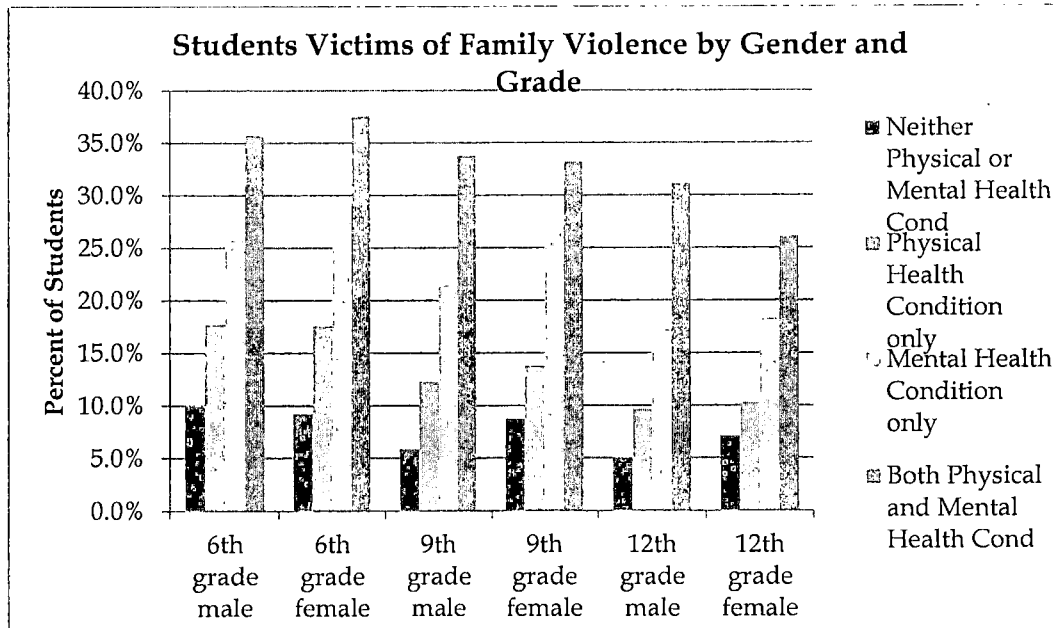


Figure 17 Victims of Family Violence by Gender, Grade and Health Status

Students were asked, “Has an older or stronger family member ever touched you sexually or had you touch them?” Across grades and genders, 3,081 students (2.6%) responded “yes” to this question.

In each grade level and within each health status grouping, a higher percentage of females responded “yes” than males the sole exception being among 12th graders with both mental health and physical health conditions where the percentage of males responding yes (17.6%) exceeded the percentage of females (13.8%) (Table 8)

<b>Percentage of Students Experiencing Sexual Abuse by a Family Member by Health Status, Grade and Gender</b>						
	6th grade male	6th grade female	9th grade male	9th grade female	12th grade male	12th grade female
Neither Physical or Mental Health Condition	0.9%	1.8%	0.9%	2.8%	1.3%	2.8%
Physical Health Condition only	2.5%	3.2%	2.1%	5.2%	3.0%	5.0%
Mental Health Condition only	2.9%	7.9%	3.9%	10.6%	5.8%	8.2%
Both Physical and Mental Health Cond.	6.1%	10.2%	10.8%	14.4%	17.2%	13.8%

Table 8 Victims of Sexual Abuse by Grade, Gender and Health Status

## Conclusion

Nearly one in five 6<sup>th</sup>, 9<sup>th</sup> and 12<sup>th</sup> graders has a chronic health condition, with 12<sup>th</sup> graders being more likely to have chronic condition than 6<sup>th</sup> graders. From 2007 to 2010, the percentage of students with a chronic physical health condition in each grade level and both genders has decreased and the percentage of students having a mental health condition has remained stable, with the exception of 9<sup>th</sup> and 12<sup>th</sup> grade females where there has been a slight decline. The percentage of students with chronic conditions varies by race with mixed raced and American Indian having the highest percentages of students with chronic health conditions and Asian and Hispanic / Latino having the lowest percentages of students with chronic conditions.

The Minnesota Student Survey elicits student experiences in relation to a number of risk and protective factors – those that threaten and those that support the well-being of Minnesota's youth.

Students with chronic physical conditions, mental health conditions or both *experience risk factors* – poverty, peer rejection, school failure, school-level stressful or traumatic events, school violence, child abuse, aggression toward peers – *in greater percentages* than their healthy peers. On every indicator of risk that can threaten well-being, students with both a chronic physical condition and a chronic mental health condition experienced the greatest risk followed by those with a mental health condition alone and thereafter students with physical conditions only. Students with chronic conditions *experience protective factors* – good coping skills, academic achievement, physical and psychological safety, and presence of mentors – *in smaller percentages* than do their healthy peers. Students with both a physical and a mental health condition experienced protective factors to a lesser extent than did students with mental health conditions alone. Students with physical conditions only experienced protective factors in higher percentages than did their peers with mental health conditions, but to a lesser extent than their healthy peers.

### About Measures That Matter.

"Measures That Matter: The Status of Children with Special Health Care Needs in Minnesota" is a joint effort of the Minnesota Department of Human Services and the Minnesota Department of Health to identify, track and report on health indicators regarding children and youth with or at high risk for chronic illnesses and disabilities and their families.

Questions about this data brief or Measures That Matter:

Sarah Thorson, MCH Assurance Section,  
Performance Measurement and Quality Improvement Division  
Minnesota Department of Human Services  
(651) 431-3431  
[sarah.j.thorson@state.mn.us](mailto:sarah.j.thorson@state.mn.us)



revised: 05/02/2012

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<sup>i</sup> Powers, LE., Oswald, M., Violence and Abuse Against People with Disabilities: Experiences, Barriers and Prevention Strategies, Center of Self-Determination, Oregon Health & Science University. <http://www.directcareclearinghouse.org/download/AbuseandViolenceBrief%203-7-04.pdf>, accessed 4/29/12

<sup>ii</sup> American Academy of Pediatrics Committee on Child Abuse and Neglect, Maltreatment of Children with Disabilities, Policy Statement, May 2007, reaffirmed January 2011.