

Mental health problems and treatment receipt among youth in Minnesota:

Data from 2010 Minnesota Student Survey

July 2013



Minnesota Department of **Human Services**
Performance Measurement and Quality Improvement Division

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In brief

- 11.2% of students in the survey were estimated to be at risk of mental illness during the past year.
- American Indians, Hispanics and students with a mixed racial/ethnic background as well as students from low income households were more likely than their respective counterparts to be at risk of mental illness during the past year.
- Controlling for socio-demographic factors, being bullied by other students, being the victim of physical/sexual abuse, and feeling not cared for by friends were the 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 and violent behaviors.
- 46.1% of students who were at risk of mental illness did not receive treatment during the past year.

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ADA2 (12-12)

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Mental health is essential to a person's overall well-being and the ability to live a full and productive life. Adolescence is a critical period when various developmental changes happen, which makes this time particularly receptive to positive influences, but at the same time more prone to an emotional rollercoaster and risky behaviors. Mental health disorders affect children and adolescents at an increasingly alarming rate. In the United States, approximately one in five adolescents have a diagnosable mental health disorder¹ and nearly one in ten are emotionally impaired.² Healthy People 2020, which provides a comprehensive set of 10-year, national goals and objectives for improving the health of all Americans, set a couple of objectives for adolescents' mental health: reducing the proportion of adolescents who experience major depressive episodes (MDE) to 7.4% and suicide attempts to 1.7 per 100 adolescents³.

In Minnesota, 9% of school-age children and 5% of preschool children have a serious emotional disturbance that interferes significantly with the child's functioning at home and in school⁴. 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.⁵ They also found that the most common diagnoses were attention-deficit/hyperactivity disorder (ADHD) and depression.

Using data from the 2010 Minnesota Student Survey (MSS), this report examines the mental health problems among youths in Minnesota. MSS is a statewide school-based survey conducted every three years for grades 6, 9 and 12 in public schools.⁶ While all the schools were invited, participation in the survey was voluntary for both school districts and students. In 2010, 295 out of 335 public school districts participated with a total of 130,908 students participating across three grades (71% of total enrollment of public schools in grades 6, 9 and 12).

Sample Characteristics

Table 1 summarizes the characteristics of participating students. About half of the students were females across all three grades. Over a quarter (27.9%) of the students said that they were receiving a free or reduced-price lunch at school, which was used as a proxy measure for low household income. The prevalence of students from a low income household was higher among the younger students: 32.7% of 6th graders, 27.5% of 9th graders and 22.7% of 12th graders reported that they received a free or reduced-price lunch at school.

¹ Schwarz, S. W. (2009). Adolescent mental health in the United States: Facts for policymakers. Downloaded on April 31, 2013 from http://www.nccp.org/publications/pub_878.html.

² Knopf, D., Park, J. & Paul Mulye T. (2008). The mental health of Adolescents: A national profile, 2008. San Francisco, CA: National Adolescent Health Information Center, University of California, San Francisco.

³ More information about Healthy People 2020 is available at <http://healthypeople.gov/2020>.

⁴ The estimates are from the web page of Children's Mental Health Division of DHS; accessed on May 2, 2013.

⁵ Minnesota Council of Health Plans. Minnesota's Mental Health. February 2008. Accessed on May 1, 2013 at <http://www.mnhealthplans.org/news/documents/MentalHealthExecutiveSummary.pdf>

⁶ A previous report on mental health from the 2007 MSS data as well as other reports on MSS can be found DHS web page: www.dhs.state.mn.us/mss.

About three quarters (75.6%) of the students were white while 5.7% were black, 5.6% were Asian/Pacific Islanders, 4.5% Hispanic, and 1.6% were American Indian. About 7.0% selected more than one of the five racial/ethnic categories: More than eight in ten of these students (83.9%) selected two racial/ethnic categories, with white being the most selected (84.4%), followed by American Indian (45.8%) and black (31.0%)⁷. Overall, there are more minority students among younger students (27.7% among 6th graders, 25.1% among 9th graders, and 19.7% among 12th graders).

Table 1. Socio-demographic characteristics of survey participants.

		Grade 6 (n=46,787)	Grade 9 (n=47,387)	Grade 12 (n=36,734)	Total (n=130,908)
		%	%	%	%
Gender	Female	50.0	50.4	50.3	50.2
Race/ethnicity	White	72.3	74.9	80.3	75.6
	Black	6.5	5.6	5.0	5.7
	Hispanic	5.6	4.7	3.2	4.5
	Asian or Pacific Islander	5.5	5.7	5.5	5.6
	American Indian	2.3	1.4	.8	1.5
	Multiple race/ethnicity*	7.8	7.7	5.2	7.0
Household Income	Low	32.7	27.4	22.7	27.9

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

Measurement

There were 12 items measuring mental health conditions in the 2010 MSS questionnaire (see Table 2). These items were 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 analysis showed a high level of inter-item 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.

⁷ Among those who selected two racial/ethnic categories, 36% selected white and American Indian; 19.8% selected white and black/African American/African; 16.7% selected white and Hispanic.

Table 2. Questions measuring mental health conditions with answering categories.

Questions	Answering Categories (value)
During the last 30 days...	
have you felt you were under any stress or pressure?	Yes, almost more than I could take (4); Yes, quite a bit of pressure (3); Yes, more than usual (2); Yes, a little (1); No (0)
have you felt sad?	All the time (4); Most of the time (3); Some of the time (2); A little of the time (1); None of the time (0)
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 (4); Quite a bit (3); Some, enough to bother me (2); A little bit (1); Not at all (0)
have you felt nervous, worried, or upset?	All the time (4); Most of the time (3); Some of the time (2); A little of the time (1); None of the time (0)
How much do you agree or disagree with the following statements?	
I get a lot of headaches, stomachaches or sickness	Agree (3); Mostly agree (2);
I am often irritable and angry	Mostly disagree (1);
I have many fears and am easily scared	Disagree (0)
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	

Table 3 shows the mean scores of the mental health index across various socio-demographic subgroups. Overall, female students show higher levels of mental distress compared to their male counterparts (14.5 vs. 12.0)⁸. This gender difference was consistent across all subgroups of grade, race/ethnicity and household income.

Among male students, there was not much difference across the three grades while among female students the mental health index scores are higher among 9th and 12th graders than 6th graders. This made the gender difference more pronounced among 9th and 12th graders.

⁸All the comparisons reported are significant at a 95% confidence level unless mentioned otherwise.

Minority students showed higher levels of mental distress compared to white students, with American Indians and those with a mixed racial/ethnic background showing the highest mean scores on the mental health index. Students receiving a free or reduced price lunch at school also showed higher mean scores on the mental health index compared to those from higher income households.

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

		Female	Male	Total
Grade				
	6 th grade	13.3	12.2	12.7
	9 th grade	15.4	11.8	13.7
	12 th grade	14.9	11.9	13.5
Race/Ethnicity				
	White	14.0	11.6	12.8
	Black	15.0	12.5	13.7
	Hispanic	15.6	12.0	13.8
	Asian/Pacific Islander	15.4	12.8	14.2
	American Indian	17.6	13.8	15.5
	Multiple race/ethnicity	17.2	13.9	15.7
Household Income				
	Low	16.4	13.1	14.8
	High	13.9	11.6	12.8
Total		14.5	12.0	13.3

Table 4. Percent of Minnesota students who reported a suicide attempt during past year by socio-demographic variables.

		Female %	Male %	Total %
Grade				
	6 th grade	2.3	2.1	2.2
	9 th grade	4.3	2.5	3.4
	12 th grade	1.9	2.5	2.2
Race/Ethnicity				
	White	2.3	1.9	2.1
	Black	3.9	4.2	4.1
	Hispanic	5.4	3.4	4.4
	Asian/Pacific Islander	3.1	2.4	2.8
	American Indian	5.9	5.9	5.9
	Multiple race/ethnicity	6.0	3.9	5.1
Household Income				
	Low	4.8	3.5	4.1
	High	2.3	2.0	2.1
Total		2.9	2.4	2.7

MSS also asked students whether they tried to kill themselves during the past year. Overall, 2.7% reported suicide attempts during the past year (Table 4). In general, female students were more likely than males to report suicide attempts during the past year (2.9% vs. 2.4%). Among female students, 9th graders had the higher prevalence of suicide attempts than those in grades 6 or 12. Among male students, however, there was no substantial difference across grades. Ninth grade female students showed the highest prevalence of suicide attempts during the past year.

Compared to white students, minority students were more likely to report suicide attempts during the past year, with American Indian students showing the highest prevalence. With the exceptions of blacks and American Indians, female students in all racial/ethnic subgroups were also more likely than their male counterparts to report suicide attempts. Students from low income families were more likely than those from high income families to report suicide attempts during the past year and this was consistent for both genders.

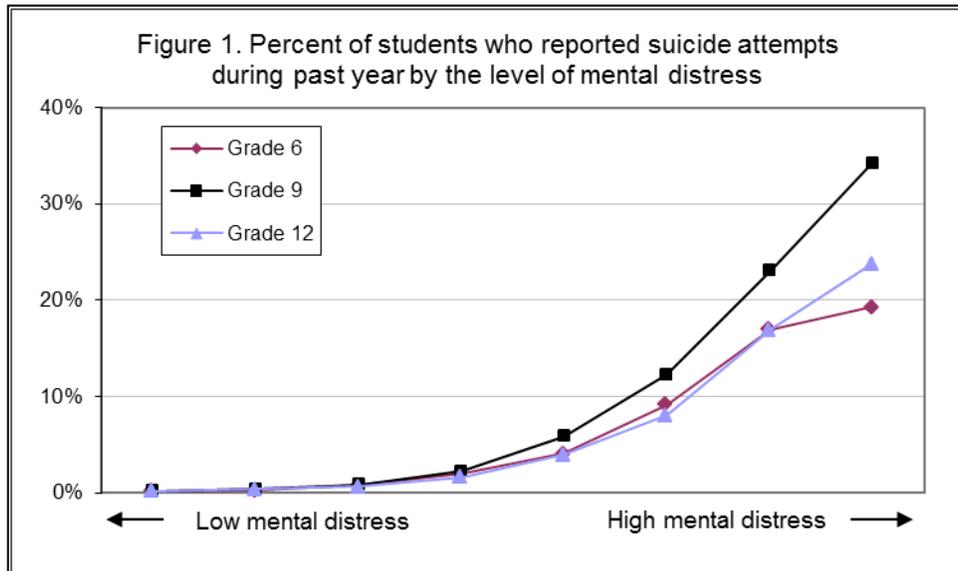


Figure 1 shows the relationship between the levels of mental distress measured by the index score and suicide attempts during the past year. Across all three grades, the higher the level of mental distress a student reports, the more likely s/he would attempt suicide during the past year. This relationship was more pronounced among 9th graders than the other grades. That is, compared to the other grades at the same level of reported mental distress, students in 9th grade were more likely to attempt suicide.

To incorporate not only the current level of mental distress, but also other relevant indicators over some period of time, this report used three criteria in defining the group of students at risk of mental illness: mental health index score, suicide attempts in the past year and mental health treatment in the past year. If a student scored 28 or higher on the mental health index, had attempted suicide during the past year, or had been treated for a

mental or emotional health problem during the past year, s/he was categorized as being at-risk of mental illness⁹ during the past year. This, however, does not indicate any clinical diagnoses.

Mental health among MN students: Socio-demographic factors

Using the definition explained above, 11.2% of students who participated in the survey were estimated to be at risk of mental illness during the past year (Table 5). Female students were more likely to be at risk of mental illness than their male counterparts (13.5% vs. 8.7%). While this pattern holds for each grade, the gender difference was more pronounced among older students than those in grade 6. Regardless of gender, 9th and 12th graders were more likely than 6th graders to be at risk of mental illness.

Table 5. Percent of Minnesota students who were at risk of mental illness during the past year by socio-demographic variables.

		Female	Male	Total
		%	%	%
Grade	6 th grade	8.3	6.2	7.3
	9 th grade	16.9	9.9	13.5
	12 th grade	15.5	10.2	12.9
Race/Ethnicity	White	12.3	7.7	10.0
	Black	15.0	12.5	13.7
	Hispanic	16.6	9.6	13.1
	Asian/Pacific Islander	12.1	7.8	10.0
	American Indian	22.1	14.5	17.9
	Multiple race/ethnicity	21.9	14.2	18.5
Household Income	Low	18.6	11.4	15.2
	High	11.9	7.8	9.9
Total		13.5	8.7	11.2

Minority students except API were more likely than white students to be at risk of mental illness during the past year. American Indian students and those with multiple racial/ethnic backgrounds had the highest proportion being at risk of mental illness (17.9% and 18.5% respectively). In all racial/ethnic subgroups, female students were more likely than males to be at risk of mental illness. Black students showed the least gender difference: 15.0% of black females vs. 12.5% of black males were estimated to be at risk. About one in seven

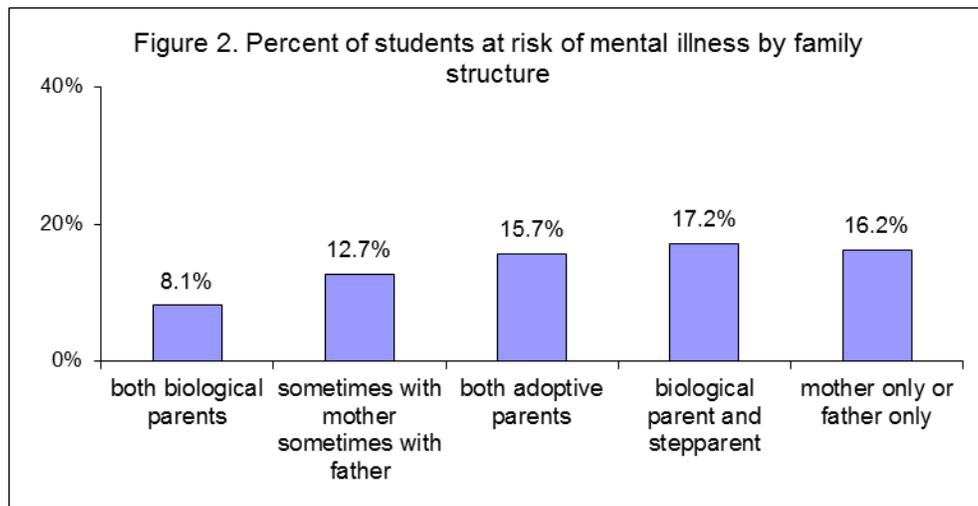
⁹ It is critical to keep in mind that children and adolescents are still developing and actively adapting as they go through periods of developmental transition. Their mental health and illness should be viewed from this developmental context. That is, abnormal conditions are often separated only by small differences of degree and can be temporary in the active developmental process.

students (15.2%) from low income households were at risk of mental illness compared to one in ten students (9.9%) from high income households.

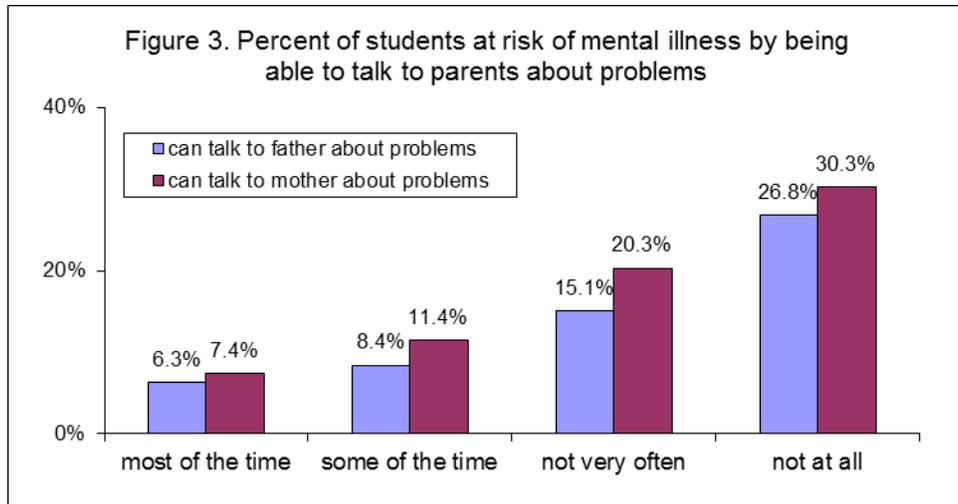
Mental health among MN students: Other environmental factors

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 were examined in relation to mental health.

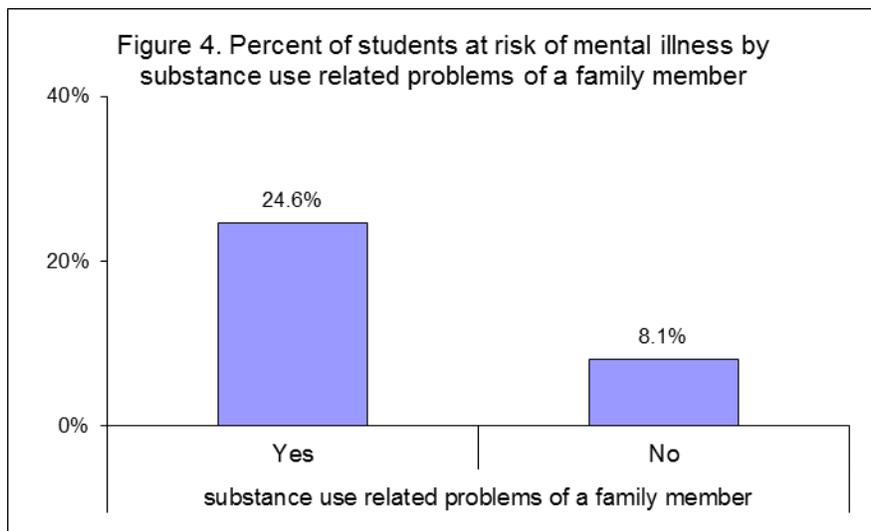
A majority of the students (59.8%) reported that they lived with both biological parents with 15.2% reporting to live with mother only, 2.8% reporting to live with father only, 9.4% reporting to live sometimes with mother, sometimes with father, 1.2% reporting to live with both adoptive parents and 6.4% reporting to live with a biological parent and a stepparent. As figure 2 shows, students living with both biological parents were less likely than those with any other family structure to be at risk of mental illness.



A majority of students (55.8%) said that they could talk to their mothers most of the time about problems they had, and about 37.8% said so about their fathers. On the other hand, 4.3% said that they could not talk to their mothers about problems at all while 7.5% said so about their fathers. If students could talk to their parents about problems they had, they were less likely to be at risk of mental illness (Figure 3). 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 about four times more likely to be at risk of mental illness during the past year (30.3% vs. 7.4% in the case of mothers; 26.8% vs. 6.3% in the case of fathers).

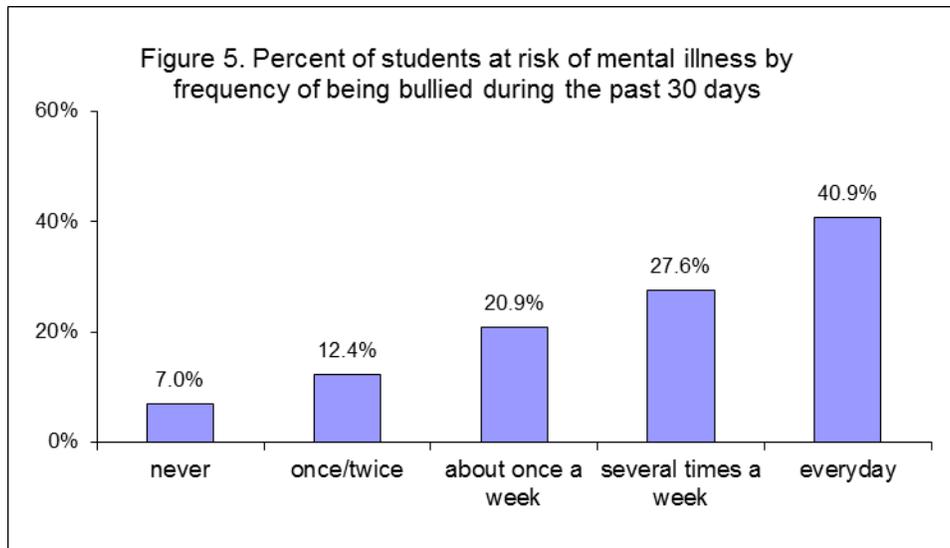


Problems related to substance use by family members were asked separately for alcohol and drugs: “Has alcohol [drug] use by any family member repeatedly caused family, health, job, or legal problems?” About 17.5% of the students said yes, and these students were about three times more likely than their counterparts to be at risk of mental illness during the past year (Figure 4).

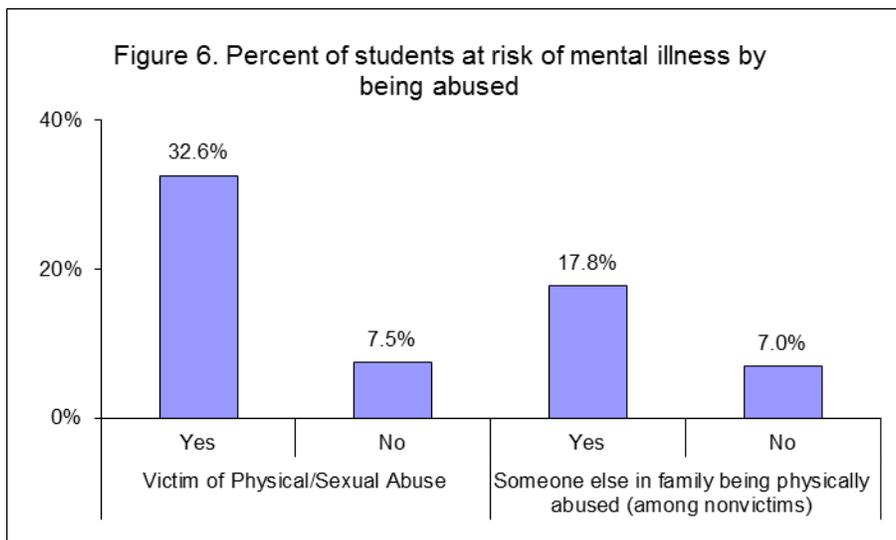


Students were asked “During the last 30 days, how often has another student or group of students made fun of or teased you in a hurtful way, or excluded you from friends or activities?” While a majority (60.0%) said never, more than one in four students (27.2%) had such an experience once or twice during the past 30 days, and an additional 12.7% were being bullied once a week or more often during the past 30 days. As figure 5 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. 7.0%) and the

likelihood of being at risk of mental illness increased to almost six times for those being bullied everyday (40.9% vs. 7.0%).



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 measured 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, 14.0% of students reported being abused either physically or sexually. Students who were abused either physically or sexually, compared to those who were not abused, were more than four times as likely to be at risk of mental illness during the past year (Figure 6).



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, 5.1% said “yes” to this question, and they were more than twice as likely to be at risk of mental illness as those who said “no” to this question (17.8% vs. 7.0%). This shows that, even when they were not victims of an abuse themselves, witnessing someone in the family being 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 (82.4%) answered that they felt their parents cared very much, 41.4% said so about friends and only 20.4% said so about teachers or other adults at school. On the other hand, 1.4% of the students felt that their parents did not care at all; 1.9% said so about friends and 5.0% about teachers or other adults at school.

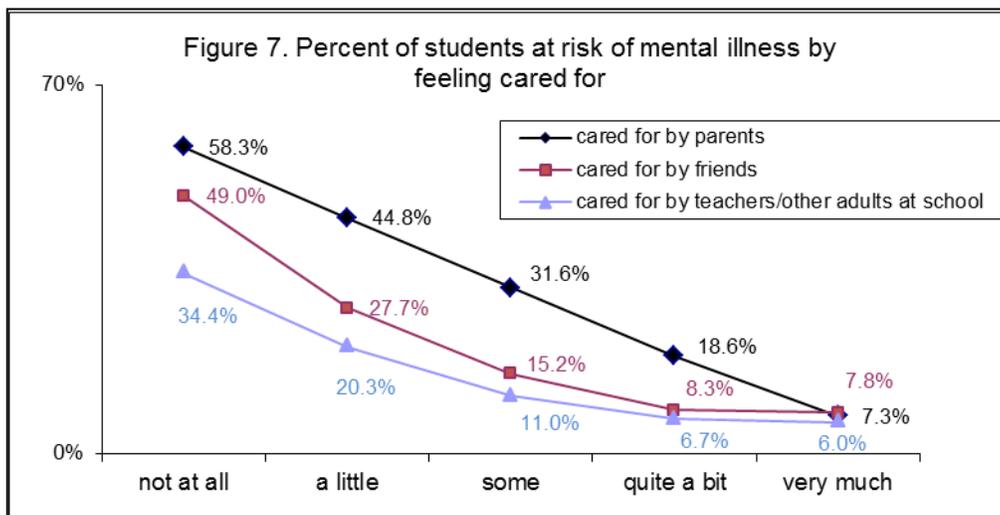


Figure 7 shows that the more a student feels being cared by parents, friends or teachers, the less likely s/he would be at risk of mental illness during the past year. More than half (58.3%) of those who felt that their parents did not care at all about them were at risk of mental illness, compared to 7.3% of those who felt that their parents cared about them very much.

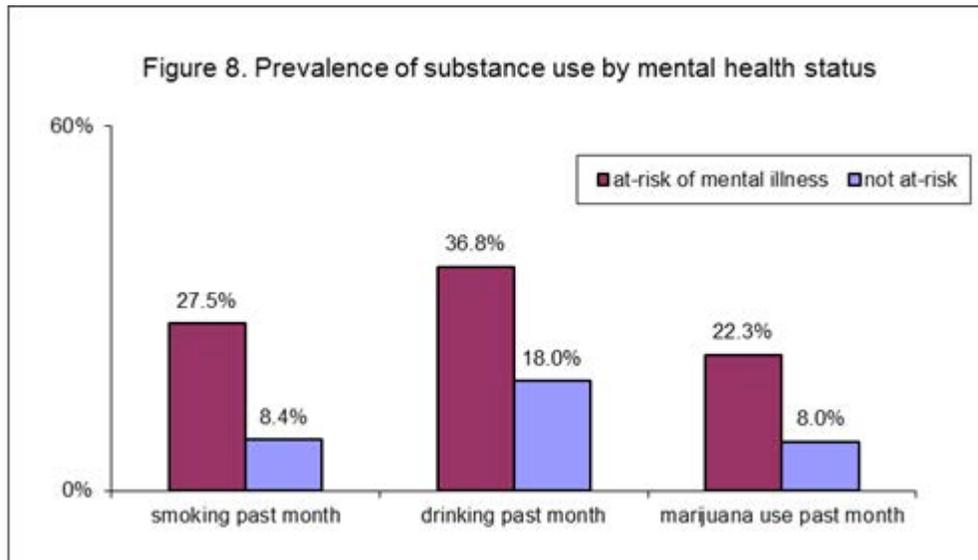
The relationship was quite linear between the likelihood of being at risk of mental illness during the past year and feeling cared for by parents while it was curvilinear in the case of friends or teachers. Thus, there was a substantial proportion (31.6%) of students who felt that they were cared for “some” by parents still were at risk of mental illness, while about half of that proportion (15.2%) who felt that they were cared for “some” by friends were at risk of mental illness. There was still a 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’ by parents (18.6% vs. 7.3%), while there was only a little difference

between feeling cared for ‘quite a bit’ and feeling cared for ‘very much’ by friends or teachers (8.3% vs. 7.8% for friends; 6.7% vs. 6.0% for teachers or other adults at school).

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 list of factors and their odds ratios are reported in the Appendix A. 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, feeling not at all cared for by friends, and being a victim of physical or sexual abuse were the top five most influential factors in predicting the likelihood of being at risk of mental illness.

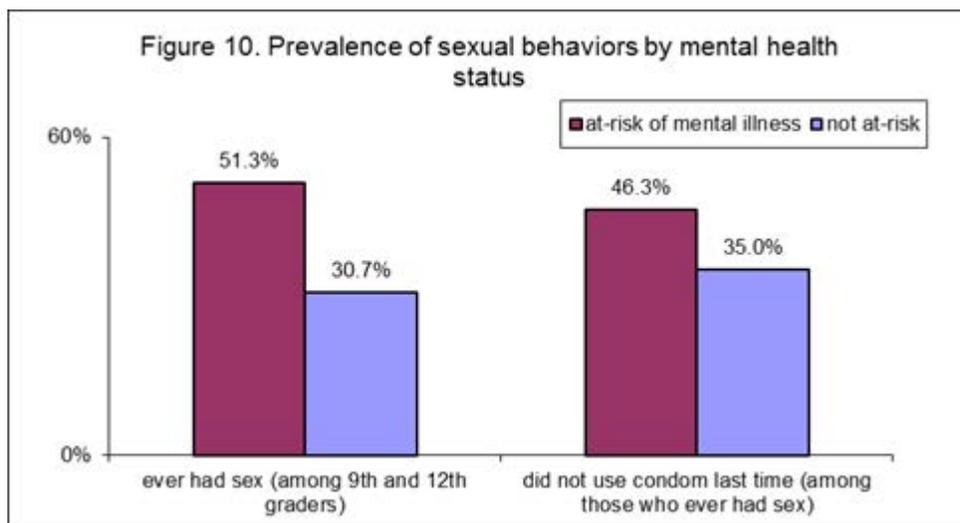
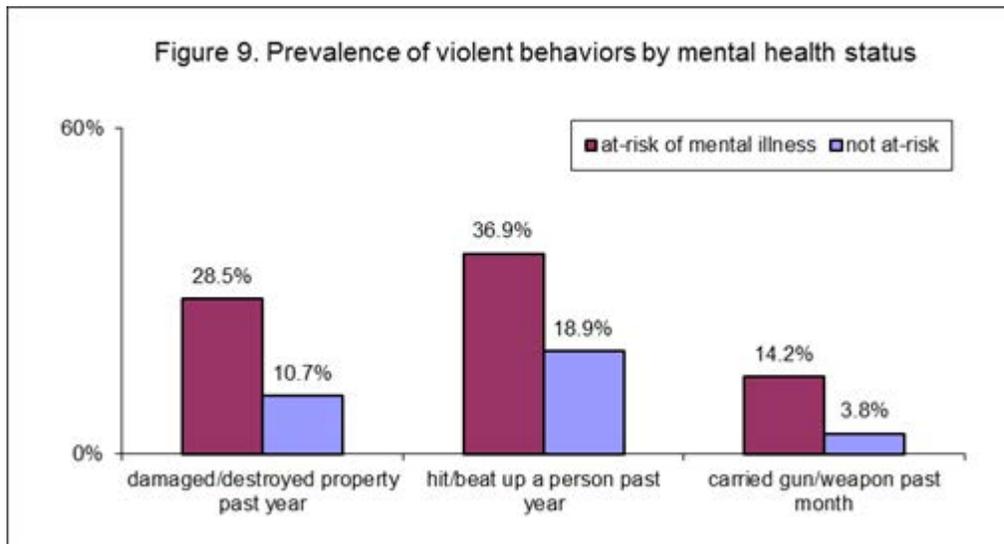
Health risk behaviors and mental health

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. Substance use was measured by asking “During the last 30 days, on how many days did you smoke a cigarette; drink one or more drinks of an alcoholic beverage; use marijuana or hashish? About one in ten (10.4%) of the students smoked a cigarette; 19.7% drank an alcoholic beverage; and 9.5% used marijuana.



As Figure 8 shows, compared to those who were not at risk of mental illness during the past year, students at risk of mental illness were three times more likely to smoke a cigarette during the past 30 days (27.5% vs. 8.4%); about twice more likely to drink an alcoholic beverage during the past 30 days (36.8% vs. 18.0%); and about three times more likely to use marijuana during the past 30 days (22.3% vs. 8.0%).

Students who were at risk of mental illness during the past year were more likely to be involved in various violent behaviors compared to those without such a risk (Figure 9). For example, they were more likely to have damaged or destroyed property at school or somewhere else during the last 12 months (28.5% vs. 10.7%); more likely to have hit or beat up another person during the last 12 months (36.9% vs. 18.9%); more likely to have carried a gun or other weapon on school property during the last 30 days (14.2% vs. 3.8%).



Sexual behavior related questions were asked to 9th and 12th graders. Overall, 33.5% of them said that they had sexual intercourse (19.8% of 9th graders; 50.6% of 12th graders). About 51.3% of students who were at risk of mental illness, compared to 30.7% of those who were not at risk, said that they had sexual intercourse (Figure 10). 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?” 46.3% of those who were at risk of mental illness said “No” compared to 35.0% among those who were not at risk.

Receipt of Treatment for Mental Health Problems

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.

Among those who were at risk of mental illness during the past year, just over half (55.1%) received treatment during the past year. As Table 6 shows, male students who were at risk of mental illness were slightly more likely than their female counterparts to have received treatment during the past year (56.6% vs. 54.3%), and 12th graders were more likely than 9th graders to have received treatment during the past year (61.9% vs. 50.0%).

Table 6. Prevalence of treatment receipt among students at risk of mental illness by socio-demographic variables.

		Female	Male	Total
		%	%	%
Grade	9 th grade	47.8	54.0	50.0
	12 th grade	63.3	59.8	61.9
Race/Ethnicity	White	59.5	60.5	59.8
	Black	34.4	51.0	42.2
	Hispanic	39.9	49.7	43.5
	Asian/Pacific Islander	26.5	30.0	27.9
	American Indian	43.3	45.3	44.2
	Multiple race/ethnicity	48.1	60.5	52.3
Household Income	Low	44.6	52.8	47.5
	High	59.3	58.1	58.8
Total		54.3	56.6	55.1

When gender and grade were examined together, an interesting interaction appeared. Among 9th graders who were at risk of mental illness during the past year, more male students than females had received treatment during the past year. Among 12th graders, on the other hand, female students were more likely than their male counterparts to have received treatment. A multivariate logistic regression analysis including gender, grade, race/ethnicity and household income found the interaction term between gender and grade significant (odds ratio=1.479; p<.001).

Minority students who were at risk of mental illness during the past year were less likely than their white counterparts to have received treatment during the past year. Asian/Pacific Islanders had the lowest rate of treatment receipt with only 27.9% 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 from low income households were less likely than the others to have received treatment, and the difference was a lot more pronounced among females (14.7%) than males (5.3%).

Two sets of multivariate logistic regression analysis were conducted for 9th and 12th graders separately and the results confirmed what was observed above. Among 9th and 12th graders who were at risk of mental illness, minorities compared to whites, and those from low income households in contrast to their more affluent counterparts were less likely to have received treatment for mental health problems during the past year (see Appendix Tables A-2 and A-3 for detailed results of regression). Among 9th graders who were at risk of mental illness, females were less likely than males to have received treatment for mental health problems during the past year. This gender difference was reversed among 12th graders but the odds ratio was found not significant in the multivariate analysis (odds ratio=1.102; p=.149).

In summary

Mental health issues and problems appear in families of all social, economical, and cultural backgrounds. Yet, there are some youths who are at greater risk by virtue of a broad array of factors. This report found 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 more 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. Students from low income households were more likely than their counterparts to be at risk of mental illness. Controlling for socio-demographic factors, being bullied by other students, being the victim of physical or sexual abuse, and feeling not cared for by friends were the most influential factors in predicting the likelihood of being at risk of mental illness.

Students at risk of mental illness were more likely to have been involved in various health risk behaviors, such as smoking, drinking, using illicit drugs, and having sex without using a condom. In addition, they were more likely to have been involved in violent behaviors, such as damaging property, beating up a person, and carrying a gun or other weapon.

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 (46.1%) 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 higher percentage of minority students and those from low income households are in need for treatment.

The analyses found that 9th grade, but not 12th grade, female students at risk of mental illness were less likely than their male counterparts to receive treatment. It is possible that the 9th grade female students who were defined to be at risk of mental illness in this study might not be really in need of treatment but were just on an emotional rollercoaster and temporarily showing high levels of distress. This should be studied further with a diagnostic measure of mental illness.

Many mental health problems diagnosed in adulthood begin in adolescence¹⁰, making the diagnosis and treatment during adolescence even more critical. Mental health has been receiving more attention recently and parents, practitioners, and policy makers are recognizing the importance of young people's mental health issues. Yet the evidence base to support efforts to understand the effect of mental health problems and to improve access to care as well as the outcomes of treatment is still limited and derived largely from studying adults¹¹. The evidence base for mental illness among adolescents should come from a carefully designed system with special consideration for the developmental transition actively happening in adolescence.

¹⁰ Kessler, RC., Berglund, P. demler, O. et al. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey replication. *Archives of General Psychiatry*, 61(10), 1180-1188.

¹¹ Rand Corporation (2010). The teen depression awareness project: Building an evidence base for improving teen depression care. Downloaded on May 1, 2013 from http://www.rand.org/pubs/research_briefs/RB9495/index1.html.

Appendix

Multivariate logistic regression results

Table A-1. 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	1.360	1.23-1.51
Male in grade 9	1.905	1.73-2.10
Female in grade 9	3.429	3.13-3.76
Male in grade 12	2.275	2.05-2.52
Female in grade 12	3.937	3.58-4.33
Race/ethnicity (white)		
American Indian	1.340	1.11-1.63
Black	0.869	0.77-0.98
Hispanic	1.012	0.89-1.15
Asian/Pacific Islander	0.838	0.75-0.94
Mixed race/ethnicity	1.429	1.31-1.56
Household income (high) Low	1.087	1.03-1.15
Living with both biological parents (all the others)	1.290	1.23-1.36
Not at all can talk with mother about problems (all the other categories)	1.487	1.35-1.64
Not at all can talk with father about problems (all the other categories)	1.683	1.57-1.81
Feel not at all cared for by friends	3.192	2.77-3.68
Feel not at all cared for by teachers/other adults at school	1.859	1.70-2.04
Feel not at all cared for by parents	2.283	1.93-2.71
Bullied once a week or more often during the past 30 days	3.210	3.03-3.41
Physical/sexual abuse victim	2.830	2.66-3.01
Someone else in family being physically abused	1.373	1.28-1.47
Have alcohol/drug use related problems by a family member	1.910	1.81-2.02

Table A-2. Treatment receipt among **9th graders** 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	.756	.68-.85
Race/ethnicity (white)			
	American Indian	.658	.45-.97
	Black	.678	.53-.86
	Hispanic	.626	.48-.81
	Asian/Pacific Islander	.376	.28-.50
	Mixed race/ethnicity	.900	.77-1.06
SES (high)	Low	.801	.71-.90

Table A-3. Treatment receipt among **12th graders** 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	1.102	.97-1.26
Race/ethnicity (white)			
	American Indian	.523	.31-.86
	Black	.407	.30-.55
	Hispanic	.550	.40-.77
	Asian/Pacific Islander	.186	.13-.26
	Mixed race/ethnicity	.754	.59-.96
SES (high)	Low	.720	.62-.84