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08
College Student Health Survey Report

HEALTH AND ACADEMIC PERFORMANCE
Minnesota Postsecondary Students

BOYNTON
HEALTH SERVICE

UNIVERSITY OF MINNESOTA

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Introduction

Q: What do the following health conditions and health-related behaviors have in common?

- Lack of Health Insurance
- Gambling
- Tobacco Use
- Alcohol Use
- Marijuana Use
- Chronic Health Condition
- Mental Health Condition
- Lack of Sleep
- Lack of Exercise

A: They are all associated with lower grade point averages among Minnesota postsecondary students.

The data presented in this report document a link between the health of Minnesota college students and their academic achievement.

Health has a powerful influence on an individual's ability to function in the world. Those who struggle with health issues or engage in unhealthy behaviors face many additional barriers in their daily lives. For college students, health issues that affect their ability to attend class, complete projects, write papers, or take tests can have a profound impact on their ability to succeed academically.

College students are often perceived to be in the prime of their life and free of health problems. As a result, there have been limited efforts and funding devoted to gathering information about college student health and health-related behaviors, other than in the areas of alcohol and drug use. Most notably, there is a lack of data on the association between academic achievement and health and health-related behaviors.

Over the past four years, Boynton Health Service at the University of Minnesota has worked with 38 two- and four-year public and private postsecondary schools to gather quality data that provide insights into the health and well-being of the undergraduate and graduate students attending these schools. These data offer a window into the health of all students attending Minnesota postsecondary schools.

In spring 2008, Boynton Health Service conducted a comprehensive survey of a randomly selected group of college students attending 14 Minnesota two- and four-year public and private institutions. The data captured reveal a variety of health and health-related factors associated with academic performance.

This report highlights the following factors found to influence the academic performance of Minnesota college students: physical and mental health, health insurance, chronic conditions, acute conditions, mental health, perception of stress and ability to manage stress, experience of stressors, financial issues, and health-related behaviors such as tobacco use, alcohol use, marijuana and other illicit drug use, gambling, nutrition, physical activity, and sleep.

Boynton Health Service hopes these survey findings will spur action among college and university faculty, staff, and administrators to improve allocation of resources and development of programs to address the health needs of their students as a means to improve academic success.

Survey
Methodology

Over 8,000 undergraduate and graduate students enrolled in 14 Minnesota postsecondary institutions completed the 2008 College Student Health Survey, developed by Boynton Health Service. As an incentive, all students who responded to the survey were entered into a drawing for gift certificates valued at $3,000 (one), $1,000 (one), and $500 (two) at a variety of stores.

Participants were contacted through multiple mailings and e-mails:

- Postcards were sent to randomly selected students notifying them of their eligibility to participate in the survey.

- Students were e-mailed a link to the online survey.

- Reminder postcards and multiple e-mails were sent to all students to encourage participation.

- All students were sent a minimum of two invitations to participate in the survey.

A total of 25,077 undergraduate and graduate students from 14 Minnesota colleges and universities were invited to participate in the 2008 College Student Health Survey (see Appendix 1 for a list of participating schools).

2008 College Student Health Survey Methodology Highlights

- **25,077** students were randomly selected to participate in this survey.

- **8,118** completed the survey.

- **32.4%** was the overall 2008 College Student Health Survey response rate.

In addition to the 25,077 randomly selected students attending the 14 schools, also surveyed were 1,323 veterans who attended one of the 14 schools or the University of Minnesota–Twin Cities. The survey results for veterans will be treated as a separate report. This report is based on the original 25,077 randomly selected students.

2008 College Student Health Survey Postcard

Survey
Analysis Summary

The information presented in this report is based on the data collected from 8,118 students from 14 Minnesota colleges and universities who participated in the 2008 College Student Health Survey. Since the survey collected data from undergraduate and graduate students and from two-year and four-year schools, separate analyses were conducted for each type of student and institution. The evaluation revealed no significant differences between these groups. Because the associations with various health issues and health-related behaviors were found to be similar, the results presented in this report are based on the aggregate data from all students who participated in the survey. Refer to Appendix 2 for demographic characteristics of surveyed students.

Measuring
Academic Performance

The 2008 College Student Health Survey captured two measures of academic performance. Survey respondents reported their cumulative grade point average (GPA), which is based on a 4-point scale (A=4.00, B=3.00, C=2.00, and D=1.00). Students recorded their exact cumulative GPA, for example 3.27 or 2.95. Differences seen in mean grade point averages among various groups were tested for statistical significance. The p-value is a statistic that denotes whether the difference between two or more groups is likely to occur solely by chance. It expresses probability with a value ranging from zero to one. A p-value can indicate whether a difference between means is statistically significant, but a p-value cannot indicate whether the difference is of practical importance. In some cases, the difference in mean GPA may seem insignificant–for example, a change from 3.27 to 3.11–but considering the calculation is based on thousands of students, a seemingly small shift in mean GPA is actually quite substantial given that it is a shift at the population level. Statistically significant differences in mean GPA are noted within a graph or within the text when appropriate.

The second measure of academic performance stems from student responses to the question: During the past 12 months, how have the following affected your academic performance? (Please select the most serious outcome for each issue.) The question listed 21 issues and offered the following possible response options: I do not have the issue/not applicable; I have this issue, but my academics have not been affected; received a lower grade on an exam or important project; received a lower grade in the course; received an incomplete in the course; dropped the course; dropped out of school/took a leave of absence (see pages 11-14).

Results

# Quality of Life: Physical Health and Mental Health

The graphs on the next two pages present the results from the following survey questions related to quality of life:

- *Thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?*

- *Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?*

Survey respondents were asked to select the number of days within the past 30 days, ranging from 0 to 30, that they experienced the health issue in question. These two quality of life questions were patterned after questions used by the Centers for Disease Control and Prevention in its state-based Behavioral Risk Factor Surveillance System (BRFSS) and its National Health and Nutrition Examination Survey (NHANES).[1] These questions have been used to identify health disparities and track population trends. These quality of life data are used to assess achievement of two of the CDC's major Healthy People 2010 goals: increase quality and years of healthy life and eliminate health disparities.[1]
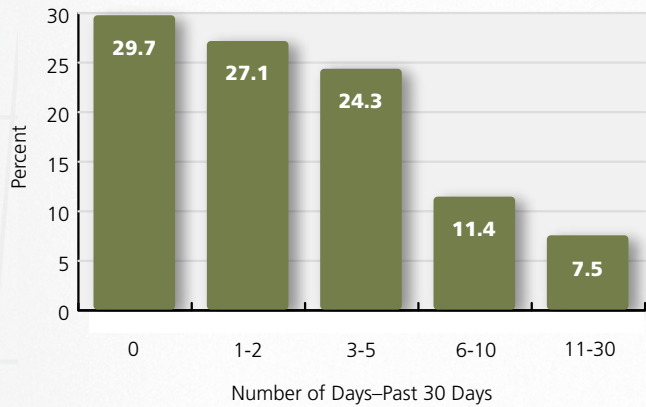
Students who report experiencing three or more days of poor physical health within the past 30 days report a lower mean grade point average (GPA) than students who report experiencing two or fewer days of poor physical health (**3.27** vs. **3.37**, respectively, p<0.0001).

Poor Physical Health and Grade Point Average

Grade Point Average vs Number of Days–Past 30 Days

- 0: 3.36
- 1-2: 3.37
- 3-5: 3.29
- 6-10: 3.25
- 11-30: 3.22
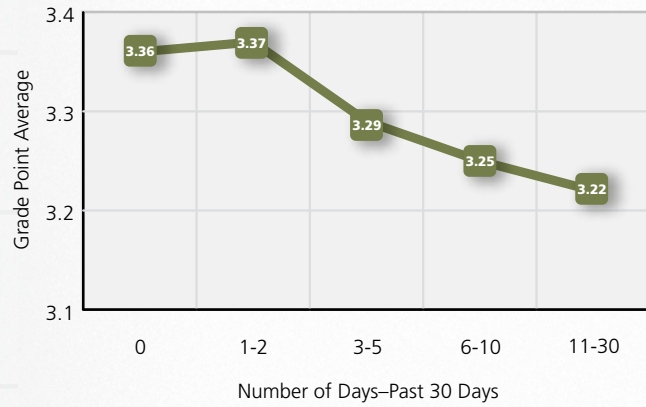
More than two-fifths (**43.2%**) of survey respondents report three or more days of poor physical health within the past 30 days.

Percent of Students Who Report Poor Physical Health

Percent vs Number of Days–Past 30 Days

- 0: 29.7
- 1-2: 27.1
- 3-5: 24.3
- 6-10: 11.4
- 11-30: 7.5

Quality of Life: Physical Health and Mental Health — Results

Poor Mental Health and Grade Point Average
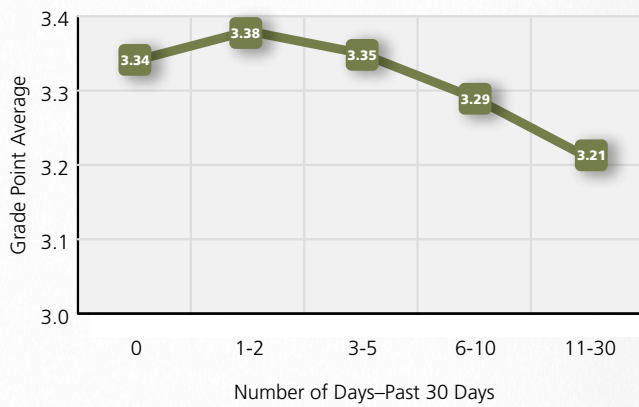
Students who report experiencing six or more days of poor mental health within the past 30 days have a lower mean GPA than students who report five or fewer days of poor mental health (**3.25** vs. **3.36**, respectively, p<0.0001).

Percent of Students Who Report Poor Mental Health
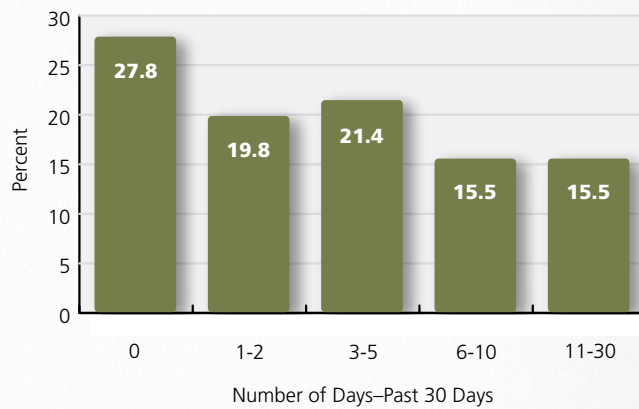
Nearly one-third (**31.0%**) of students report experiencing six or more days of poor mental health within the past 30 days.

Results

Diagnosed Chronic, Acute, and Mental Health Conditions

Survey respondents were asked to report whether they have been diagnosed with selected health conditions within their lifetime and within the past 12 months. A total of 37 conditions could be chosen (see Appendix 3). For the purpose of this report, these health conditions are grouped into three categories: chronic, acute, and mental health.
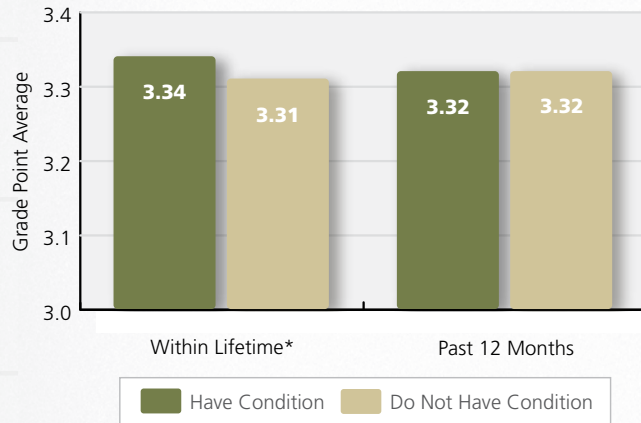
Students who report being diagnosed with a chronic health condition within their lifetime have a significantly higher mean grade point average compared to students who were not diagnosed with a chronic health condition within their lifetime (p=0.01). Students who report being diagnosed with a chronic health condition within the past 12 months and those who were not diagnosed with a chronic health condition within the past 12 months have the same mean grade point average. Further analysis shows that more than half (**57.4%**) of students report being diagnosed with a chronic condition within their lifetime, and more than one-fifth (**21.4%**) of students report being diagnosed with a chronic condition within the past 12 months.

For a list of chronic health conditions, see Appendix 3.

Diagnosed Chronic Health Condition and Grade Point Average

Grade Point Average

- 3.4
- 3.3
- 3.2
- 3.1
- 3.0

Within Lifetime*: 3.34 (Have Condition), 3.31 (Do Not Have Condition)
Past 12 Months: 3.32 (Have Condition), 3.32 (Do Not Have Condition)

■ Have Condition ■ Do Not Have Condition

*Note: The mean grade point average for students diagnosed with a chronic condition within their lifetime excludes students who report they were diagnosed within the past 12 months.

Students who report being diagnosed with an acute health condition within the past 12 months have a lower mean grade point average compared to students who were not diagnosed with an acute health condition within the past 12 months (p<0.0001). Approximately one in six (**16.8%**) students report they have been diagnosed with an acute condition within the past 12 months.
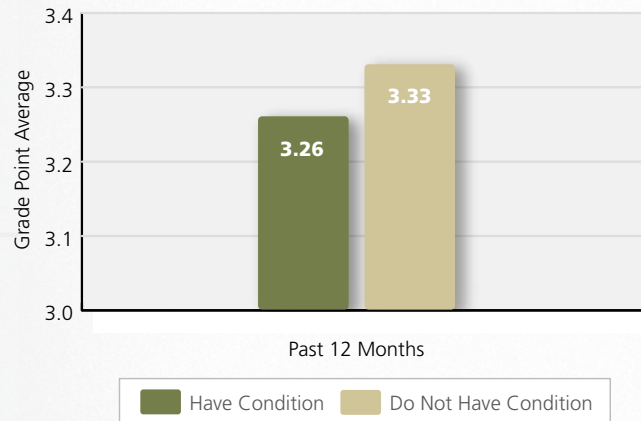
For a list of acute health conditions, see Appendix 3.

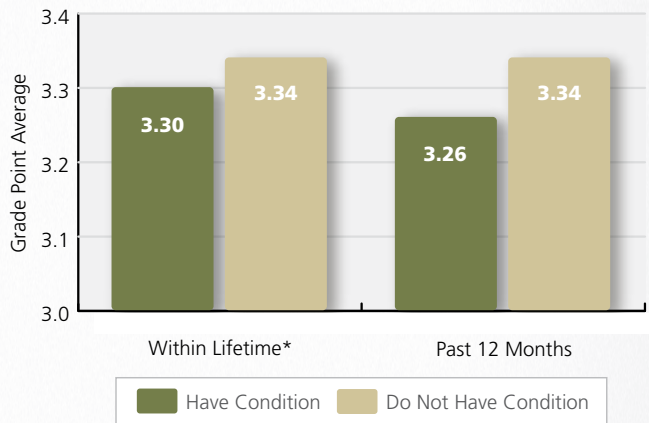**Diagnosed Acute Health Condition and Grade Point Average**

Grade Point Average

- 3.4
- 3.3
- 3.2
- 3.1
- 3.0

Past 12 Months: 3.26 (Have Condition), 3.33 (Do Not Have Condition)

■ Have Condition ■ Do Not Have Condition

Diagnosed Mental Health Condition and Grade Point Average

*Note: The mean grade point average for students diagnosed with a mental health condition within their lifetime excludes students who report they were diagnosed within the past 12 months.

Students who report being diagnosed with a mental health condition within the past 12 months have a lower mean grade point average than students who were not diagnosed with a mental health condition within the past 12 months (p<0.0001). In addition, students who report being diagnosed with a mental health condition within their lifetime have a lower mean GPA than those who were never diagnosed with a mental health condition (p=0.01).

Among all students surveyed, **34.4%** report being diagnosed with a mental health condition within their lifetime, and **14.6%** report being diagnosed with a mental health condition within the past 12 months.

For a list of mental health conditions, see Appendix 3.

Results

Health Insurance

The survey examined whether there is a relationship between students' health insurance status and their academic performance.

The following survey question related to health care coverage:

Other than health care services provided at your educational institution, do you have additional health insurance coverage?

Response options:

- *Yes, I purchase health insurance through my educational institution*
- *Yes, through my parents' health insurance plan*
- *Yes, I purchase another health insurance plan*
- *No, I do not have health insurance*
- *Don't know*

Students with health insurance have a significantly higher mean GPA compared to students without health insurance (**3.33** vs. **3.26**, respectively, p<0.0001).

Health Insurance Status and Grade Point Average

Percent of Students by Health Insurance Status
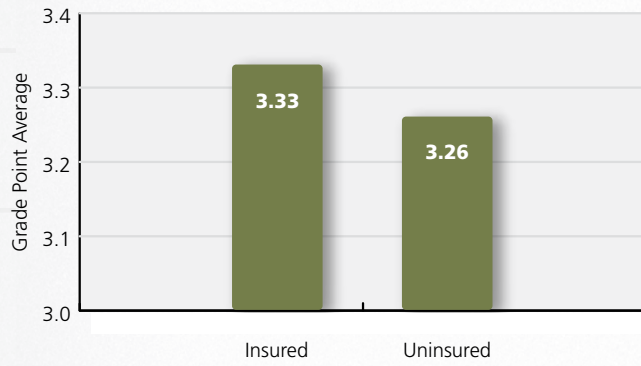
Among survey respondents, **87.7%** indicate they have health insurance, **11.2%** indicate they lack health insurance, and **1.1%** report they are unsure of their health insurance status.
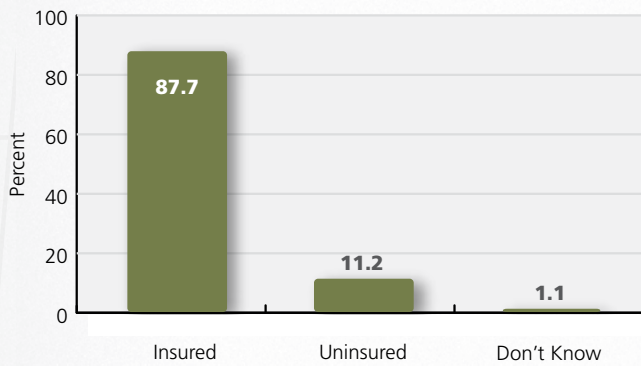
Results

Impact of Health and Personal Issues on Academic Performance

In addition to examining some broad measures of health and their impact on grade point average, the survey looked at specific health and personal issues that may affect students' academic performance.

The following survey question related to conditions affecting academic performance:

During the past 12 months, how have the following affected your academic performance?
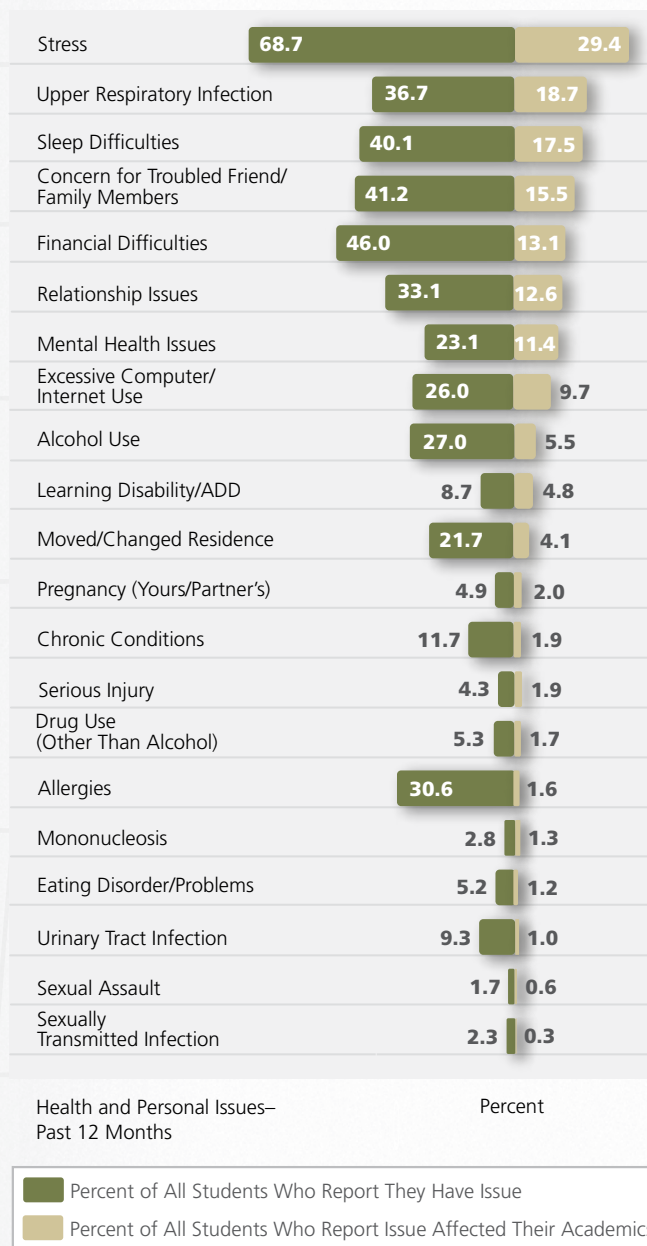*(Please select the most serious outcome for each issue).*

Response options:

- *I do not have this issue/not applicable*
- *I have this issue–my academics have not been affected*
- *Received a lower grade on an exam or important project*
- *Received a lower grade in the course*
- *Received an incomplete in the course*
- *Dropped the course*
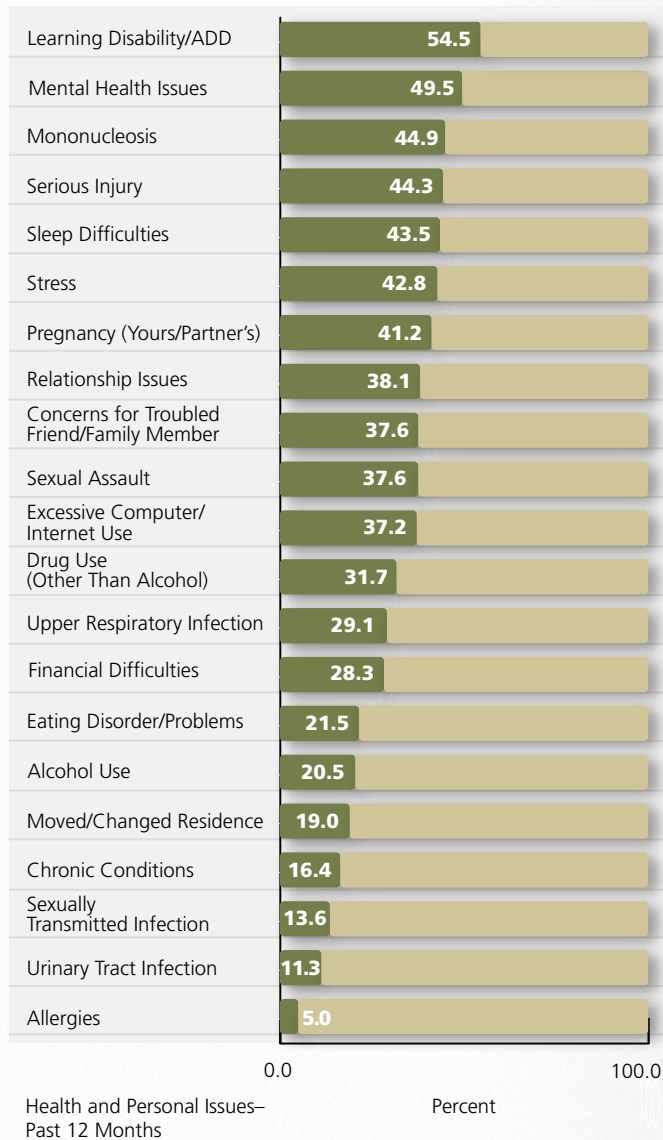- *Dropped out of school/took a leave of absence*

The graph displays the percentage of all students who report having each health or personal issue (bar on the left side) and the percentage of all students who report the issue affected their academic performance (bar on the right side) within the past 12 months. The percentages are based on all students who responded to the survey question.

The condition impacting academic performance most frequently is stress, with more than one-fourth (**29.4%**) of students reporting it affected their academic performance. The condition with the second highest frequency is upper respiratory infection, with nearly one-fifth (**18.7%**) of students indicating it affected their academic performance. The results demonstrate the magnitude of the impact health and personal issues have on the academic performance of the entire student population.

Prevalence of Health and Personal Issues

Health and Personal Issue	Percent of All Students Who Report They Have Issue	Percent of All Students Who Report Issue Affected Their Academics
Stress	68.7	29.4
Upper Respiratory Infection	36.7	18.7
Sleep Difficulties	40.1	17.5
Concern for Troubled Friend/Family Members	41.2	15.5
Financial Difficulties	46.0	13.1
Relationship Issues	33.1	12.6
Mental Health Issues	23.1	11.4
Excessive Computer/Internet Use	26.0	9.7
Alcohol Use	27.0	5.5
Learning Disability/ADD	8.7	4.8
Moved/Changed Residence	21.7	4.1
Pregnancy (Yours/Partner's)	4.9	2.0
Chronic Conditions	11.7	1.9
Serious Injury	4.3	1.9
Drug Use (Other Than Alcohol)	5.3	1.7
Allergies	30.6	1.6
Mononucleosis	2.8	1.3
Eating Disorder/Problems	5.2	1.2
Urinary Tract Infection	9.3	1.0
Sexual Assault	1.7	0.6
Sexually Transmitted Infection	2.3	0.3

Health and Personal Issues–Past 12 Months   Percent

Legend:
■ Percent of All Students Who Report They Have Issue
■ Percent of All Students Who Report Issue Affected Their Academics

Results

Impact of Health and Personal Issues on Academic Performance

Impact of Health and Personal Issues on Academic Performance

Health and Personal Issues– Past 12 Months	Percent
Learning Disability/ADD	54.5
Mental Health Issues	49.5
Mononucleosis	44.9
Serious Injury	44.3
Sleep Difficulties	43.5
Stress	42.8
Pregnancy (Yours/Partner's)	41.2
Relationship Issues	38.1
Concerns for Troubled Friend/Family Member	37.6
Sexual Assault	37.6
Excessive Computer/Internet Use	37.2
Drug Use (Other Than Alcohol)	31.7
Upper Respiratory Infection	29.1
Financial Difficulties	28.3
Eating Disorder/Problems	21.5
Alcohol Use	20.5
Moved/Changed Residence	19.0
Chronic Conditions	16.4
Sexually Transmitted Infection	13.6
Urinary Tract Infection	11.3
Allergies	5.0

0.0   Percent   100.0

■ Among Students With Issue–
Percent Who Report Issue Affected Their Academics

■ Among Students With Issue–
Percent Who Report Issue Did Not Affect Their Academics

The graph displays the percentage of impact a given health or personal behavior had on academic performance among students who experienced each issue within the past 12 months. Among students who report having a learning disability, for example, **54.5%** indicate the issue affected their academic performance. Among students who report they have allergies, only **5.0%** report the issue affected their academic performance.

The findings demonstrate the profound impact health and personal issues have on academic performance.

Students who report a specific health or personal issue affected their academic performance within the past 12 months usually have lower mean grade point averages than students who report not having the issue within the past 12 months. There appears to be a consistent relationship between students' perception that their academic performance has been affected and a lower mean grade point average.

Further analysis reveals that the mean grade point averages of students who report having an issue but that the issue did not affect their academic performance are similar to the mean GPAs of students who report they do not have the issue.

The only exceptions are for the following issues: excessive computer/internet use, alcohol use, learning disabilities/ADD, and drug use. For these four issues, students who report having the issue but that it did not affect their academic performance have lower mean GPAs than students who report they do not have the issue (p<0.01).

Health and Personal Issues and Grade Point Average

Health or Personal Issue*	Grade Point Average	
	Do Not Have Issue	Have Issue and Issue Affected Academics
Stress	3.31	3.17
Upper Respiratory Infection	3.31	3.18
Sleep Difficulties	3.34	3.13
Concern for Troubled Friend/Family Member	3.33	3.16
Financial Difficulties	3.36	3.11
Relationship Issues	3.36	3.14
Mental Health Issues	3.33	3.14
Excessive Computer/Internet Use	3.36	3.08
Alcohol Use	3.37	2.96
Learning Disability/ADD	3.35	2.94
Moved/Changed Residence	3.34	3.09
Pregnancy (Yours/Partner's)–Female	3.38	3.09
Pregnancy (Yours/Partner's)–Male	3.21	2.98
Chronic Conditions	3.32	3.18
Serious Injury	3.33	3.00
Drug Use (Other Than Alcohol)	3.34	2.90
Allergies	3.32	3.17
Mononucleosis	3.33	3.00
Eating Disorder/Problems	3.32	3.26
Urinary Tract Infection	3.32	3.05
Sexual Assault–Female	3.38	3.12
Sexual Assault–Male	3.21	2.83
Sexually Transmitted Infection	3.33	3.06

Difference p<0.05
Do Not Have Issue vs. Issue Affected Academics

Difference p<0.0001
Do Not Have Issue vs. Issue Affected Academics

Difference Is Not Statistically Significant

*Note: Order of issues is based on their prevalence among students.

Results

Impact of Health and Personal Issues on Academic Performance

Results

Stress

More than one-fourth (**29.4%**) of students report stress affected their academic performance.

Three questions in the survey addressed the issue of stress. Two questions specifically assessed students' perception of the level of stress in their life and of their ability to manage the stress they were experiencing. Students were asked to rate their perceived stress level in the past 30 days on a scale of 1 to 10, with 1 representing low stress and 10 representing high stress. Students were also asked to rate their ability to manage the stress they experienced in the past 30 days on a scale of 1 to 10, with 1 indicating ineffective stress management and 10 indicating effective stress management.

Students were also asked if they had experienced various mental health stressors within the past 12 months. From a selection of 18 stressors (see Appendix 3), they were asked to mark all that apply.
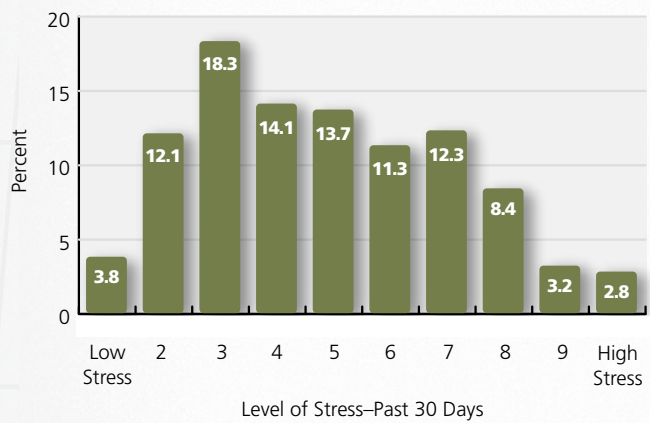
Survey results revealed no apparent relationship between students' reported stress level and their mean grade point averages.

Perceived Stress Level and Grade Point Average

Grade Point Average

- Low Stress: 3.24
- 2: 3.33
- 3: 3.34
- 4: 3.35
- 5: 3.33
- 6: 3.31
- 7: 3.32
- 8: 3.29
- 9: 3.35
- High Stress: 3.27

Level of Stress–Past 30 Days

On a scale of 1 to 10, approximately three out of five (**62.0%**) students rate their stress level within the past 30 days as 5 or less.

Percent of Students by Perceived Stress Level

Percent

- Low Stress: 3.8
- 2: 12.1
- 3: 18.3
- 4: 14.1
- 5: 13.7
- 6: 11.3
- 7: 12.3
- 8: 8.4
- 9: 3.2
- High Stress: 2.8

Level of Stress–Past 30 Days

Perceived Ability to Manage Stress and Grade Point Average

Grade Point Average vs. Ability to Manage Stress—Past 30 Days

In-effective: 3.10
2: 3.17
3: 3.18
4: 3.21
5: 3.24
6: 3.27
7: 3.30
8: 3.40
9: 3.42
Very Effective: 3.37

Students who rate their ability to manage the stress they experienced in the past 30 days higher on the effectiveness scale also have higher mean grade point averages (p<0.0001).
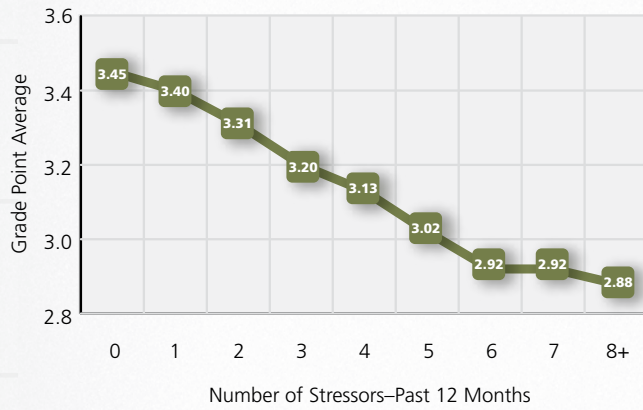
Percent of Students by Perceived Ability to Manage Stress

Percent vs. Ability to Manage Stress—Past 30 Days

In-effective: 1.3
2: 2.3
3: 4.9
4: 6.4
5: 11.1
6: 8.5
7: 14.6
8: 21.2
9: 18.4
Very Effective: 11.3
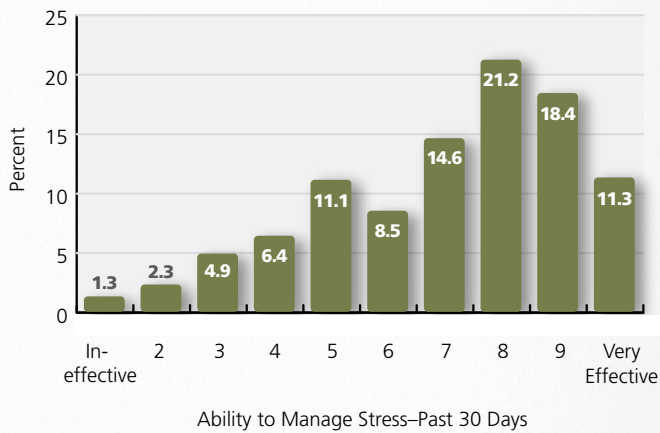
On a scale of 1 to 10, more than one-half (**50.9%**) of students rate their ability to manage their stress in the past 30 days as an 8 or above, indicating they perceive their ability to manage their stress as quite effective.

As the number of mental health stressors experienced over the past 12 months increases, mean grade point average decreases (p<0.0001).

Grade Point Average

Number of Stressors	GPA
0	3.45
1	3.40
2	3.31
3	3.20
4	3.13
5	3.02
6	2.92
7	2.92
8+	2.88

Number of Stressors–Past 12 Months

Almost three-fourths (**73.6%**) of students report experiencing two or fewer mental health stressors within the past 12 months.

Percent of Students by Reported Mental Health Stressors

Percent

Number of Stressors	Percent
0	30.2
1	24.8
2	18.6
3	11.9
4	6.5
5	3.8
6	2.1
7	1.1
8+	1.0

Number of Stressors–Past 12 Months

Stress
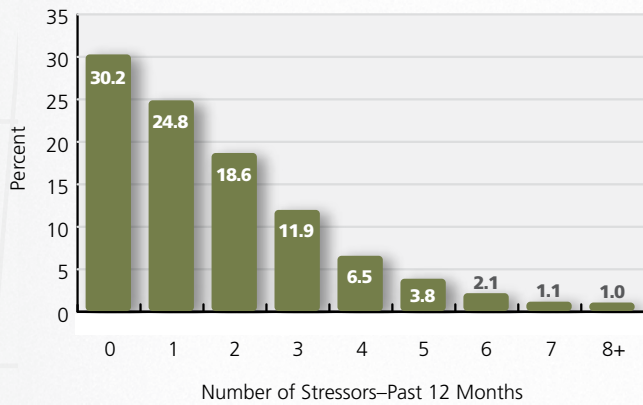
Results

Results

Sleep

Nearly one-fifth (**17.5%**) of students report that sleep difficulties affected their academic performance. Students who do not experience sleep difficulties have a mean GPA of **3.34**, whereas students who do experience the problem and say that it affected their academic work have a mean GPA of **3.13**.

The following survey question related to sleep:

On how many of the past seven days did you get enough sleep so that you feel rested when you wake up in the morning?

Response options ranged from 0 to 7 days.

Students who report receiving adequate sleep on four or fewer days within the past seven days have a lower mean grade point average than those who report receiving adequate sleep on five or more days over the past seven days (**3.29** vs. **3.39**, respectively, p<0.0001).

Days of Adequate Sleep and Grade Point Average
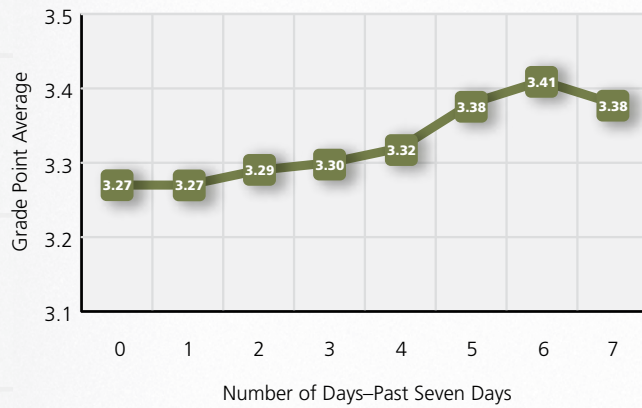
More than one-half (**53.7%**) of students report they received adequate sleep on three or fewer days over the previous seven-day period. Only **15.8%** of students indicate they received adequate sleep on six or seven days during the week prior to taking the survey.

**Percent of Students by
Reported Days of Adequate Sleep**

Sleep   Results
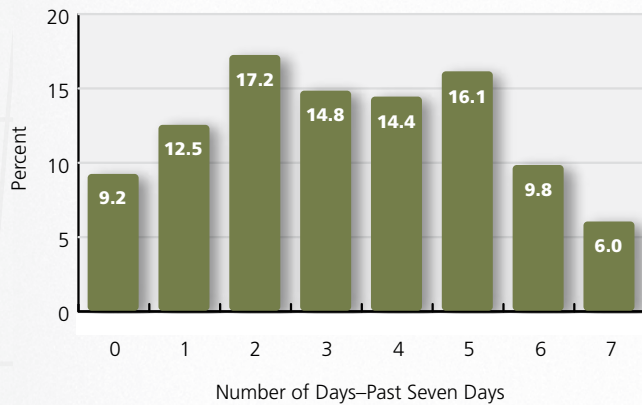
Results

Gambling

Students' gambling behavior affects their academic performance.

The following survey question pertained to engagement in gambling behavior:

Over the past 12 months, how often have you engaged in any form of gambling (online, casino, poker, slot machine, lottery, etc.)?

Response options:

• *Never*

• *Once a Year*

• *2-6 Times a Year*

• *Once a Month*

• *More Than Once per Month*

Students who report they engaged in gambling within the past 12 months have a lower mean grade point average than students who indicate they did not engage in the activity within the past 12 months (**3.27** vs. **3.38**, respectively, p<0.0001). Grade point average decreases as gambling frequency increases.

Gambling and Grade Point Average

Grade Point Average

3.4
3.38
3.3
3.32
3.26
3.2
3.22
3.16
3.1
3.0

Never   Once/Year   2-6 Times/Year   Once/Month   More Than Once/Month

Gambling Frequency–Past 12 Months

Approximately one-half of students (**48.4%**) report engaging in gambling within the past 12 months. Fewer than one in ten (**8.4%**) students engage in gambling one time per month or more.

Percent of Students by Gambling Frequency

Percent

60
50   51.6
40
30
20   17.4   22.6
10   4.7   3.7
0

Never   Once/Year   2-6 Times/Year   Once/Month   More Than Once/Month

Gambling Frequency–Past 12 Months

Results
Injury

Students who report that a serious injury within the past 12 months affected their academic performance have a mean grade point average of **3.00**, compared to a mean grade point average of **3.33** among students who did not experience a serious injury.

In the 2008 College Student Health Survey, participants were to report if they have sustained any of the following types of injuries: assaulted by another person (nonsexual), burned by fire or a hot substance, motor vehicle related, team sports, individual sports, bicycle related, in-line skating, skate boarding, falls, or other. The table on page 24 shows the percentage of students who reported a particular type of injury and the mean GPA among those students.

The data presented in the table demonstrate the association of a given type of injury with academic performance. Individuals who report experiencing within the past 12 months any of the injuries listed, except injuries that are individual sports-, bicycle-, or in-line skating-related, have lower mean grade point averages than students who have not experienced any of those injuries within the past 12 months.

Injury and Grade Point Average

Type of Injury–Past 12 Months	Percent Reported	Grade Point Average
No Injury	63.4	3.35
Falls	13.2	3.28
Team Sports	8.3	3.23
Burned by Fire or a Hot Substance	6.3	3.23
Individual Sports	5.8	3.34
Motor Vehicle Related	2.9	3.17
Assaulted by Another Person (Nonsexual)	1.9	3.03
Bicycle Related	0.9	3.29
In-line Skating	0.7	3.35
Skate Boarding	0.4	3.03
Other	12.1	3.26

Difference p<0.05 Compared to No Injury Reported
Difference p<0.0001 Compared to No Injury Reported
Difference Is Not Statistically Significant

Injury   Results

Results

Sexual Assault and Domestic Violence

Sexual assault and domestic violence are two additional important issues involving personal safety that influence grade point average.

Students were asked to answer the following two questions relating to sexual assault:

Within your lifetime or during the past 12 months, have you:
- *Experienced actual or attempted sexual intercourse without your consent or against your will?*
- *Experienced actual or attempted sexual touching without your consent or against your will?*

Students were asked to answer the following two questions relating to domestic violence:

Within your lifetime or during the past 12 months, have you:
- *Been slapped, kicked, or pushed by your significant other or spouse/partner?*
- *Been hurt by threats, "put-downs," or yelling by your significant other or spouse/partner?*

Female students who report experiencing a sexual assault within the past 12 months have a lower mean grade point average than students who do not report having that experience (p<0.0001). However, female students who report experiencing a sexual assault within their lifetime report a mean grade point average similar to that of their peers who do not report experiencing the trauma.

Among female survey respondents, **26.5%** indicate they experienced a sexual assault within their lifetime and **4.8%** say they experienced a sexual assault within the past 12 months.

*Note: The mean grade point average for female students who experienced sexual assault within their lifetime excludes those who report they experienced sexual assault within the past 12 months.

Domestic Violence and Grade Point Average
(Females Only)
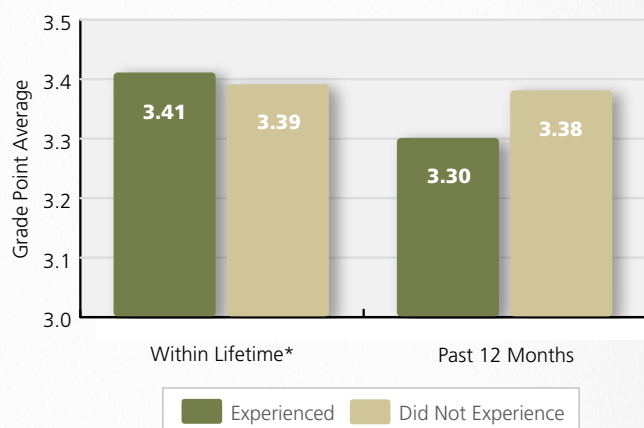
*Note: The mean grade point average for female students who experienced domestic violence within their lifetime excludes those who report they experienced domestic violence within the past 12 months.

Female students who report experiencing domestic violence within the past 12 months have a lower mean grade point average than female students who do not report having the experience (p<0.0001). Similar to the sexual assault findings, female students who report experiencing domestic violence within their lifetime (excluding those who report experiencing the trauma within the past 12 months) and female students who do not report experiencing the trauma have similar mean point averages.

Among female students, **33.3%** say they experienced domestic violence within their lifetime and **16.2%** indicate they experienced domestic violence within the past 12 months.

The impact of having experienced sexual assault or domestic violence on grade point average is less consistent among males. Male students who report experiencing sexual assault within their lifetime and/or domestic violence within the past 12 months show similar mean grade point averages compared to males who do not report having experienced these traumas. Males who report experiencing domestic violence within their lifetime have a significantly higher mean grade point average than males who do not report that experience (p=0.002). The number of males who report experiencing sexual assault within the past 12 months is too insufficient to analyze.

Male students report rates of **5.6%** for sexual assault within their lifetime, **1.5%** for sexual assault within the past 12 months, **18.0%** for domestic violence within their lifetime, and **10.6%** for domestic violence within the past 12 months.

Results

Physical Activity

Any level of physical activity appears to be associated with higher academic performance.

A relationship exists between physical activity level and grade point average but it is not as strong as those seen between grade point average and other health-related behavior practices.

Two questions in the 2008 College Student Health Survey were related to recommendations outlined by the Centers for Disease Control and Prevention for physical activity among adults.[2] Based on their responses, students were classified into four physical activity levels: zero physical activity, low level, moderate level, or high level.

In the past seven days, how many hours did you spend doing the following activities?
* *Strenuous exercise (heart beats rapidly)*
* *Moderate exercise (not exhausting)*

The CDC's recommendations for adults are to:
* Engage in moderate-intensity physical activity for at least 30 minutes on five or more days of the week
  or
* Engage in vigorous-intensity physical activity for at least 20 minutes on three or more days per week.[2]

Students who report they did not engage in any physical activity within the past seven days have a significantly lower mean grade point average than students who did engage in some level of physical activity within that time period (p=0.02).
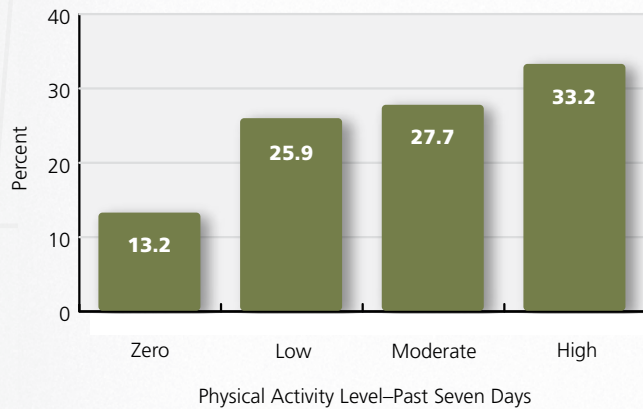
Further analysis of data shows that **24.8%** of students who did not engage in any physical activity within the past seven days report six or more days of poor physical health in the past 30 days compared to only **18.0%** of students who engaged in some level of physical activity within the past seven days.

Among survey respondents, **13.2%** report they did not engage in any physical activity within the past seven days, whereas **60.9%** indicate they engaged in a moderate or high level of physical activity within the past seven days. The moderate and high level categories meet the CDC's recommended level of physical activity as outlined on the previous page.

Physical Activity and Grade Point Average

Grade Point Average

	Zero	Low	Moderate	High
	3.29	3.34	3.34	3.31

Physical Activity Level–Past Seven Days
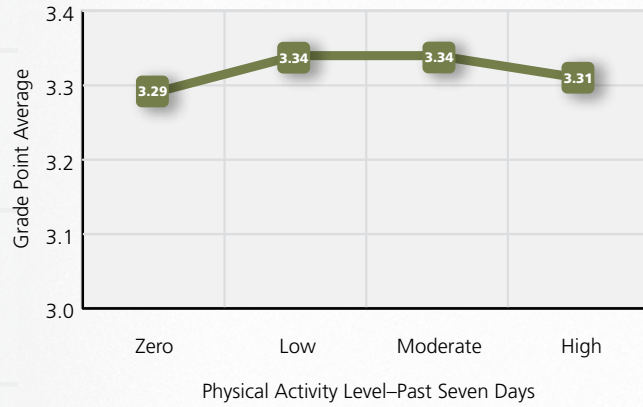
Percent of Students by Physical Activity Level

Percent

Zero	Low	Moderate	High
13.2	25.9	27.7	33.2

Physical Activity Level–Past Seven Days

Results

Television and Computer Screen Time

The impact of television and computer screen time on academic performance was also examined.

Two questions related to the amount of time spent watching television or using a computer:

On an average day, how many hours do you spend doing the following activities:

- *Watching television*
- *Playing video games or computer games or using a computer for something that is not for work or school work (includes activities such as Xbox, computer games, and the Internet)*

Survey findings reveal strong relationships between students' mean grade point averages and hours of watching television (p<0.0001) and between students' mean grade point averages and hours per day playing video games or using the computer for purposes other than work or school (p<0.0001).

Hours of Television and Computer Screen Time per Day and Grade Point Average
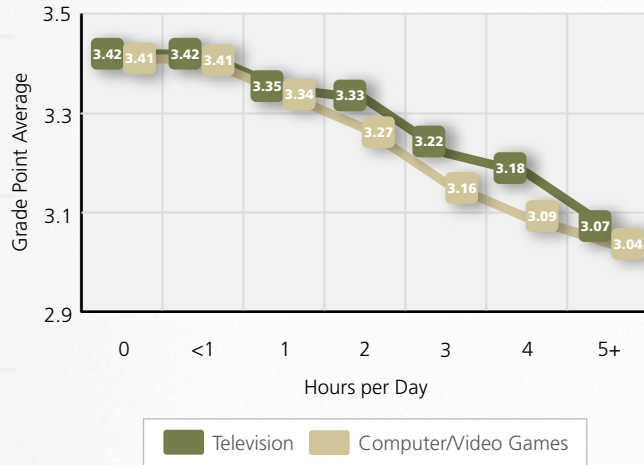
Approximately one-half (**50.2%**) of students report watching television two or more hours per day, and more than one-third (**34.0%**) of students report playing video games or using the computer for reasons other than work or school for two or more hours per day.

Percent of Students by Hours of Television and Computer Screen Time per Day
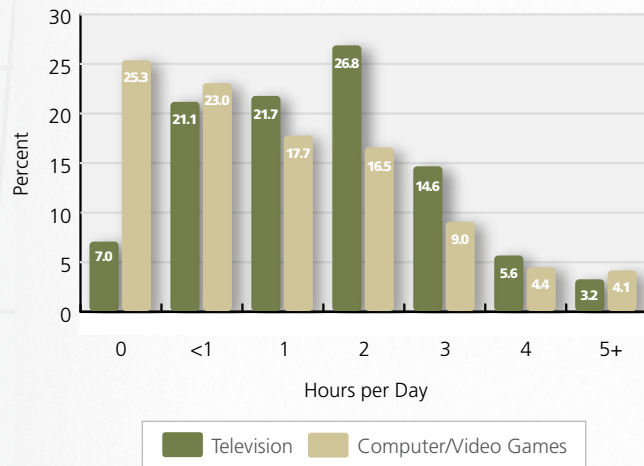
Results

Tobacco Use

The survey examined student tobacco use and its association with grade point average.

Students were asked the following survey question relating to tobacco use:
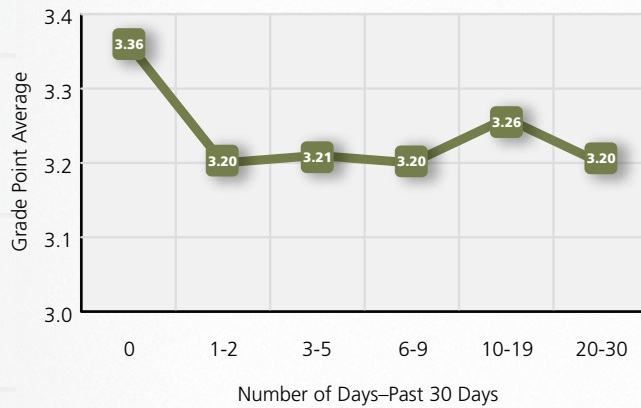
Current Tobacco Use

During the past 30 days, on how many days did you use smoking tobacco and/or smokeless tobacco?

Students who report using smoking tobacco within the past 30 days have a lower mean grade point average than students who report not using smoking tobacco within the past 30 days (**3.21** vs. **3.36**, respectively, p<0.0001). Even students who report using smoking tobacco on only one or two of the past 30 days have a lower mean GPA than students who report not using smoking tobacco within the past 30 days (p<0.0001).

Examination of additional data reveals a relationship also exists between the use of smokeless tobacco and grade point average. Students who report using smokeless tobacco within the past 30 days have a lower mean GPA than students who report not using smokeless tobacco within the past 30 days (**3.06** vs. **3.34**, respectively, p<0.0001).

Approximately three-fourths (**75.9%**) of survey respondents report they did not use smoking tobacco within the past 30 days.

Smoking Tobacco Use and Grade Point Average

**Percent of Students
by Days of Smoking Tobacco Use**
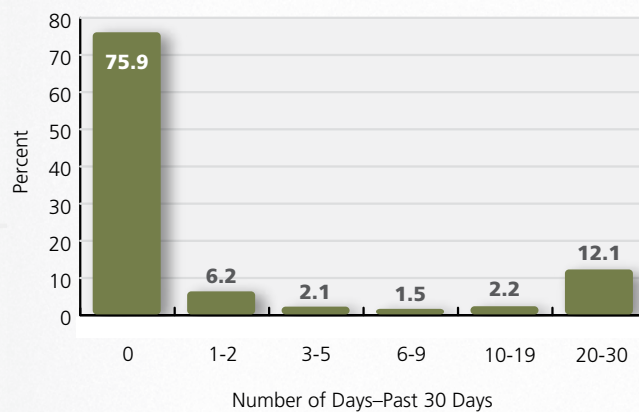
Results

Alcohol Use

The next series of graphs demonstrates an association between student alcohol use and grade point average.

The following survey questions addressed alcohol use:

Current Alcohol Use
During the past 30 days, on how many days did you use alcohol?
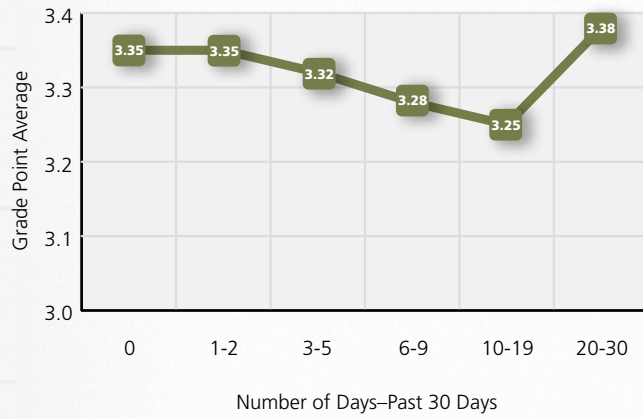
High-Risk Drinking
Think back on the last two weeks. How many times have you had five or more drinks at a sitting?

Response options:
- *I do not drink alcohol*
- *None*
- *Once*
- *Twice*
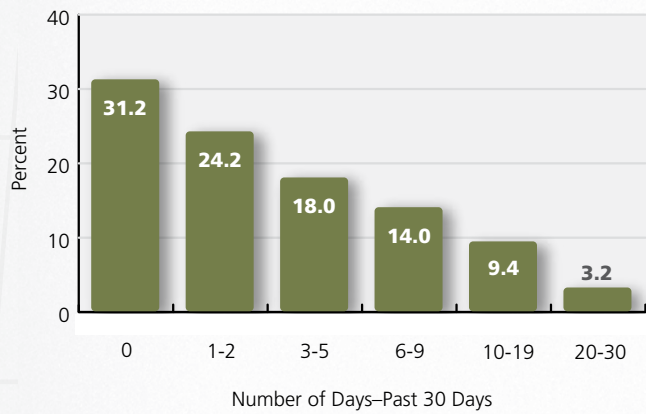- *3-5 Times*
- *6-9 Times*
- *10 or More Times*

Students who report they did not consume alcohol within the past 30 days have a mean GPA of **3.35**, while students who report they consumed alcohol on at least one of the past 30 days have a mean GPA of **3.32** (p=0.02).

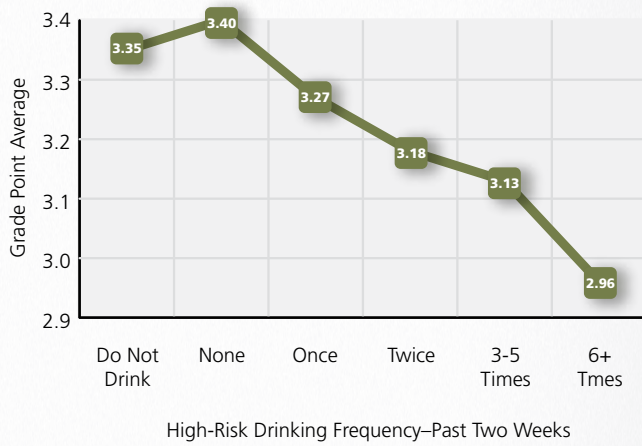**Alcohol Use and Grade Point Average**

Grade Point Average

3.35	0
3.35	1-2
3.32	3-5
3.28	6-9
3.25	10-19
3.38	20-30

Number of Days–Past 30 Days

A majority (**68.8%**) of students reports using alcohol on at least one day within the past 30 days.
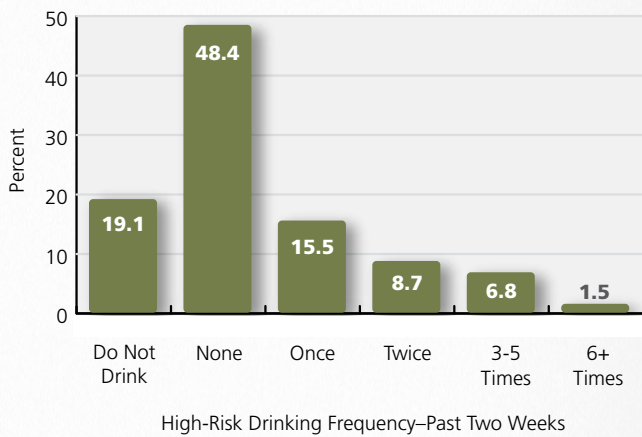
Percent of Students by Days of Alcohol Use

Percent

Days	Percent
0	31.2
1-2	24.2
3-5	18.0
6-9	14.0
10-19	9.4
20-30	3.2

Number of Days–Past 30 Days

Results

Alcohol Use

High-Risk Drinking and Grade Point Average

Grade Point Average (y-axis)

3.35, 3.40, 3.27, 3.18, 3.13, 2.96

Do Not Drink, None, Once, Twice, 3-5 Times, 6+ Tmes

High-Risk Drinking Frequency–Past Two Weeks

Students who report engaging in high-risk drinking at least one time within the past two weeks have a lower mean grade point average than students who report either not using alcohol or not engaging in high-risk drinking within the past two weeks (**3.20** vs. **3.38**, respectively, p<0.0001).

Percent of Students by High-Risk Drinking Frequency

Percent (y-axis)

19.1, 48.4, 15.5, 8.7, 6.8, 1.5

Do Not Drink, None, Once, Twice, 3-5 Times, 6+ Times

High-Risk Drinking Frequency–Past Two Weeks

Approximately one-third (**32.5%**) of students report they engaged in high-risk drinking at least one time within the past two weeks.

Results

Marijuana and Other Drug Use

This series of graphs presents survey findings on the association between students' use of marijuana and other drugs and grade point average. A total of nine "other drugs" could be chosen (see Appendix 3).

The following survey questions related to marijuana and other drug use among students:

Current Use

During the past 30 days, on how many days did you use marijuana?
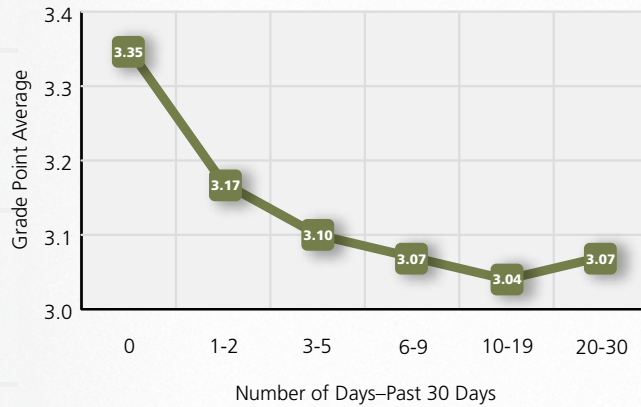
Other Illicit Drug Use

During the past 30 days, how often have you used other drugs (cocaine, hallucinogens, etc.)?

Response Options:

• *I did not use*

• *Once a Year*

• *6 Times a Year*

• *Once a Month*

• *More Than Once a Month*

Students who report using marijuana within the past 30 days have a lower mean grade point average than students who report they did not use marijuana within that time period (**3.11** vs. **3.35**, respectively, p<0.0001). Even students who report using marijuana on only one or two of the past 30 days have lower mean GPAs than students who report not using marijuana within the past 30 days (p<0.0001).

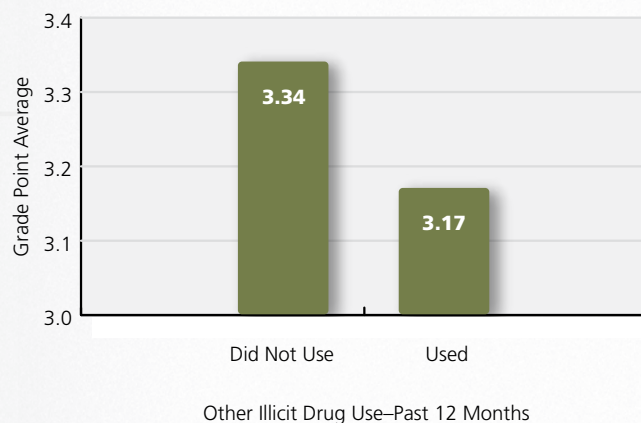**Marijuana Use and Grade Point Average**

Approximately one in ten students (**9.7%**) report using marijuana on at least one day within the past 30 days.

Percent of Students by Days of Marijuana Use
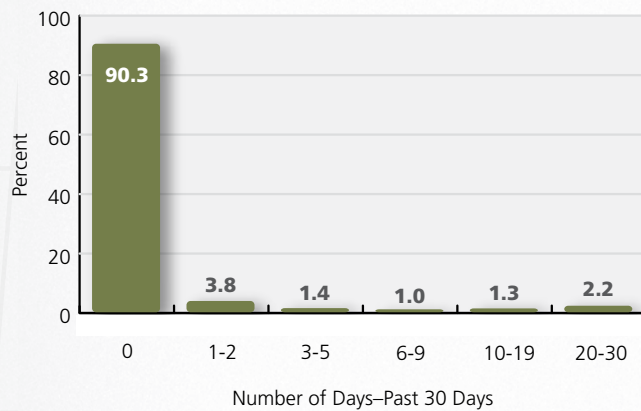
The use of illicit drugs other than marijuana affects grade point average. Students who report not using an illicit drug within the past 12 months have a mean grade point average of **3.34**, compared to a mean GPA of **3.17** among students who report using an illicit drug within the past 12 months (p<0.0001).

Fewer than one in twelve (**6.3%**) students report using an illicit drug within the past 12 months.

Other Illicit Drug Use and Grade Point Average
(Does Not Include Marijuana Use)

Marijuana and Other Drug Use   Results

Results
Financial Health

The final area examined for its impact on academic performance was financial health, including the number of hours students work for pay and their credit card use.

Students were asked the following survey questions:

• *How many hours a week do you work for pay?*

• *Last month, how much total credit card debt did you carry? That is, what was the total unpaid balance on all your credit cards?*
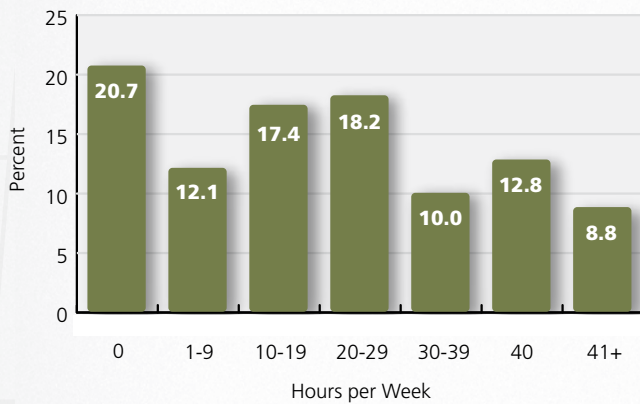
No consistent correlation was found between the number of hours per week students work for pay and their grade point average.

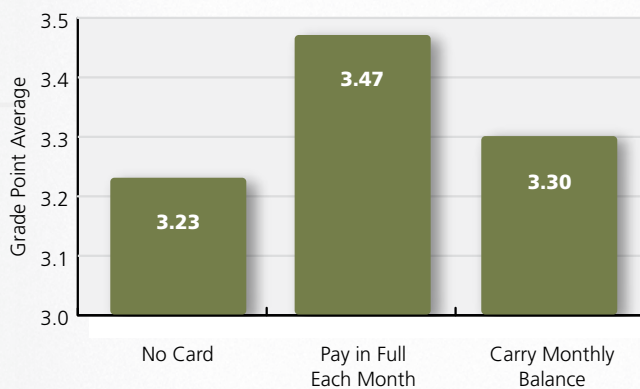**Hours per Week Worked for Pay and Grade Point Average**

Percent of Students by Hours per Week Worked for Pay
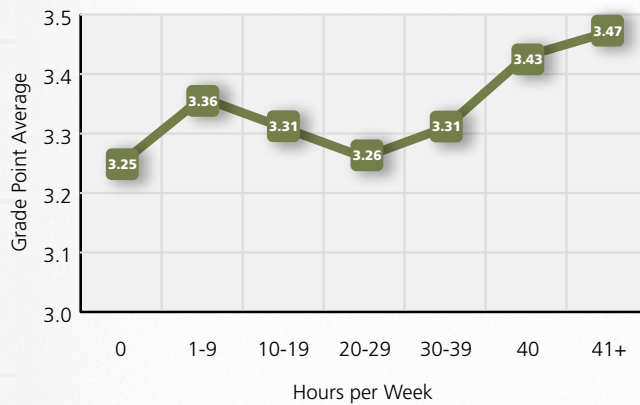
Nearly one-half (**49.8%**) of students report working 20 or more hours per week.

Students who carry a monthly balance on their credit card(s) have a lower mean grade point average than students who carry no monthly balance (**3.30** vs. **3.47**, respectively, p<0.0001). The lowest mean GPA is among students who do not own a credit card (**3.23**).

Nearly one-half (**45.3%**) of students report they carry a monthly balance on their credit card(s).

Credit Card Debt and Grade Point Average

Implications

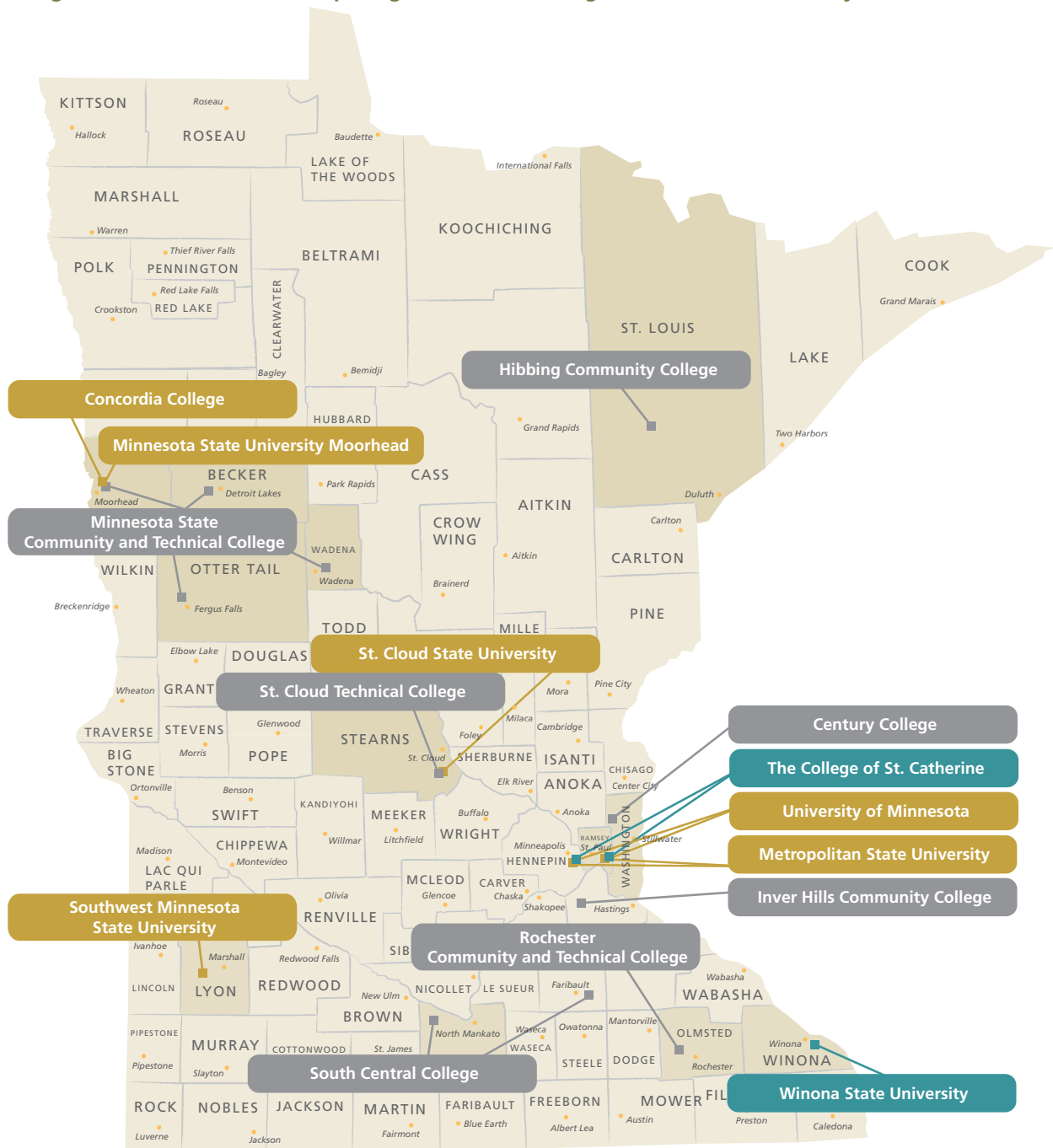## Healthy individuals make better students, and better students make healthier communities.

Results from the 2008 College Student Health Survey presented in this report document the associations between Minnesota postsecondary students' academic achievement and their access to health care, mental health status, personal safety, substance use, and other health issues. Clearly, students' academic success and their physical, emotional, behavioral, social, and financial health are interdependent.

Along with providing an excellent educational experience for their students, Minnesota institutions of higher education must help their students develop the skills and knowledge to function with a global perspective, appreciate the value of community and civic engagement, and experience the benefits of living in a diverse world. To realize these missions, the schools must provide an environment that helps safeguard and improve student health so that students can fully participate in all aspects of academic life and also be prepared to become productive members of society once they graduate.

From these findings it is obvious that policies, programs, and practices that address the health and developmental needs of young adults must be included in any comprehensive strategy for improving student academic performance. When students feel healthy, safe, and valued, they are more likely to be academically engaged and successful. Therefore, it is imperative that colleges and universities make the health, social, and environmental issues affecting student life a priority.

Appendix 1

Colleges and Universities Participating in the 2008 College Student Health Survey

Map of Minnesota showing participating colleges and universities:

- Concordia College
- Minnesota State University Moorhead
- Minnesota State Community and Technical College
- Hibbing Community College
- St. Cloud State University
- St. Cloud Technical College
- Century College
- The College of St. Catherine
- University of Minnesota
- Metropolitan State University
- Inver Hills Community College
- Southwest Minnesota State University
- Rochester Community and Technical College
- South Central College
- Winona State University

Two-Year Schools	Location	Enrollment–Spring 2008*
Century College	White Bear Lake, MN	11,872
Hibbing Community College	Hibbing, MN	1,934
Inver Hills Community College	Inver Grove Heights, MN	7,644
Minnesota State Community and Technical College	Detroit Lakes, MN Fergus Falls, MN Moorhead, MN Wadena, MN	7,642
Rochester Community and Technical College	Rochester, MN	7,791
South Central College	Faribault, MN Mankato, MN	4,824
St. Cloud Technical College	St. Cloud, MN	5,053

*Includes full-time and part-time students.

Four-Year Schools	Location	Enrollment–Spring 2008*
Concordia College	Moorhead, MN	2,801
Metropolitan State University	Minneapolis, MN St. Paul, MN	9,021
Minnesota State University Moorhead	Moorhead, MN	9,185
Southwest Minnesota State University	Marshall, MN	7,353
St. Cloud State University	St. Cloud, MN	19,671
University of Minnesota (Veterans Only)	Minneapolis, MN St. Paul, MN	362

Schools with Two-Year and Four-Year Programs	Location	Enrollment–Spring 2008*
The College of St. Catherine	Minneapolis, MN St. Paul, MN	4,907
Winona State University	Winona, MN	9,168

Appendix 2

2008 College Student Health Survey Demographics Based on Student Response

	All Students (n=8,118)
Average Age (Years)	26.3
Age Range (Years)	18-89
18-24 Years	60.8%
25 Years or Older	39.2%
Average GPA	3.32
Class Status	
First-Year Undergraduate	22.3%
Second-Year Undergraduate	21.2%
Third-Year Undergraduate	19.9%
Fourth-Year Undergraduate	15.0%
Fifth-Year Undergraduate	10.7%
Graduate or Professional	10.9%
Gender	
Male	30.8%
Female	69.0%
Transgender/Other	0.1%
Unspecified	0.1%
Ethnic Origin	
African American/Black	3.9%
American Indian/Alaskan Native	1.5%
Asian/Pacific Islander	5.0%
Latino/Hispanic	2.1%
Middle Eastern	0.4%
Caucasian/White	88.9%
Other	1.4%

Appendix 3

Lists Provided in the 2008 College Student Health Survey

Chronic Health Conditions

Alcohol Problem

Allergies

Asthma

Cancer

Diabetes Type I/Diabetes Type II

Drug Problems (Other Than Alcohol)

Genital Herpes

Genital Warts/Human Papilloma Virus

Hepatitis B/Hepatitis C

High Blood Pressure

High Cholesterol

HIV/AIDS

Obesity

Tuberculosis

Acute Health Conditions

Chlamydia

Gonorrhea

Hepatitis A

Lyme Disease

Mononucleosis

Pubic Lice

Strep Throat

Syphilis

Urinary Tract Infection

Mental Health Conditions

Anorexia

Anxiety

Attention Deficit Disorder

Autism

Bipolar Disorder

Bulimia

Depression

Obsessive-Compulsive Disorder

Panic Attacks

Post-Traumatic Stress Disorder

Seasonal Affective Disorder

Social Phobia/Performance Anxiety

Mental Health Stressors

Getting Married

Failing a Class

Serious Physical Illness of Someone Close to You

Death of Someone Close to You

Being Diagnosed as Having a Serious Physical Illness

Being Diagnosed as Having a Mental Illness

Divorce or Separation From Your Spouse

Termination of a Personal Relationship
(Not Including Marriage)

Attempted Suicide

Being Put on Academic Probation

Excessive Credit Card Debt

Excessive Debt Other Than Credit Card

Being Arrested

Being Fired or Laid Off From a Job

Roommate/Housemate Conflict

Parental Conflict

Lack of Health Care Coverage

Issues Related to Sexual Orientation

Illicit Drugs

Amphetamines

Cocaine

Ecstasy

GHB/Rohypnol

Hallucinogens

Inhalants

Opiates

Performance-Enhancing Steroids

Sedatives

Glossary

Current Alcohol Use
Any alcohol use within the past 30 days.

Current Credit Card Debt
Any unpaid balance at the end of the past month.

Current Marijuana Use
Any marijuana use within the past 30 days.

Current Tobacco Use
Any use of tobacco in the past 30 days. Tobacco use includes both smoking and smokeless tobacco.

High Credit Card Debt
A monthly debt of $1,000 or more.

High-Risk Drinking
Consumption of five or more alcohol drinks at one sitting within the past two weeks for both males and females. A drink is defined as a bottle of beer, wine cooler, glass of wine, shot glass of liquor, or mixed drink.

Past-12-Month Alcohol Use
Any alcohol use within the past year.

Past-12-Month Marijuana Use
Any marijuana use within the past year.

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1. Centers for Disease Control and Prevention. (2005). Health-related quality of life methods and measures. Atlanta, GA: U.S. Department of Health and Human Services. Retrieved April 28, 2008, from http://www.cdc.gov/hrqol/methods.htm.
2. Centers for Disease Control and Prevention. (2007). Physical activity recommendations for adults. Retrieved May 29, 2008, from http://www.cdc.gov/nccdphp/dnpa/physical/recommendations/index.htm.

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