

STUDENT HEALTH TRENDS REPORT

AY 2010-2016

Summary of findings from the 2010, 2013, 2016 National College Health Assessment II.

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STUDENT HEALTH AND PERFORMANCE

Why Is It Important?

STUDENT HEALTH AND ACADEMIC PERFORMANCE

Physical and mental health have long been linked to academic performance. A wide body of research shows that students who are healthier also perform better. In particular, physical health, mental health, substance use, physical activity, sleep, and healthful diets all impact academic performance.^{1,2} Physical health conditions such as asthma, have been positively correlated with more days of school missed and poorer academic performance.¹

Many areas of mental health affect student success. Depression has been shown to be positively correlated with concentration difficulty, low academic achievement, and high academic anxiety.² Suicide attempts, presumably resulting from untreated or under-treated depression, are also related to poor academic performance.² Anxiety is negatively associated with academic performance—students who have high levels of anxiety have poorer academic performance.³ Additionally, phobias, a severe type of anxiety, have been linked to academic *failure*.²

POSITIVE HEALTH BEHAVIORS

A number of positive health behaviors are also attributed to better educational outcomes. Adequate sleep is positively correlated with GPA, as demonstrated in a study on pharmacy students.⁴ Additionally, inadequate sleep, or sleeping problems, have been linked to increased anxiety.

Physical activity/exercise is also positively associated with higher self-esteem, lower anxiety and stress⁵, and better brain function and learning^{6,7}. Students who are physically active have better school attendance and grades.⁷ How does this work? Research on young children has shown that exercise⁶:

- Increases oxygen in the brain
- Increases neurotransmitters
- Increases neutrophins which support learning, memory, and higher thinking.

This can be extrapolated to apply to young adults/college students and academic performance. Being physically active supports brain function for better learning. A study by Purdue University also found that students who worked out at the gym at least once a week had higher grade point averages than those who did not.⁸ While it is unclear in this study if it is the “type of person” who will work-out or if it is the exercise itself that affects GPA, other research suggests that exercise does have a direct effect.⁸ Hence, students at Moorpark College will have better academic outcomes (retention and GPA) if they are physically active.

MATH AND READING

Many students in college still struggle with mathematics and/or reading and need remediation. Evidence suggests that mathematics and reading are the academic areas that are most influenced by physical activity. These areas depend on efficient and effective cognitive function, which has been linked to physical activity and physical fitness.¹⁰

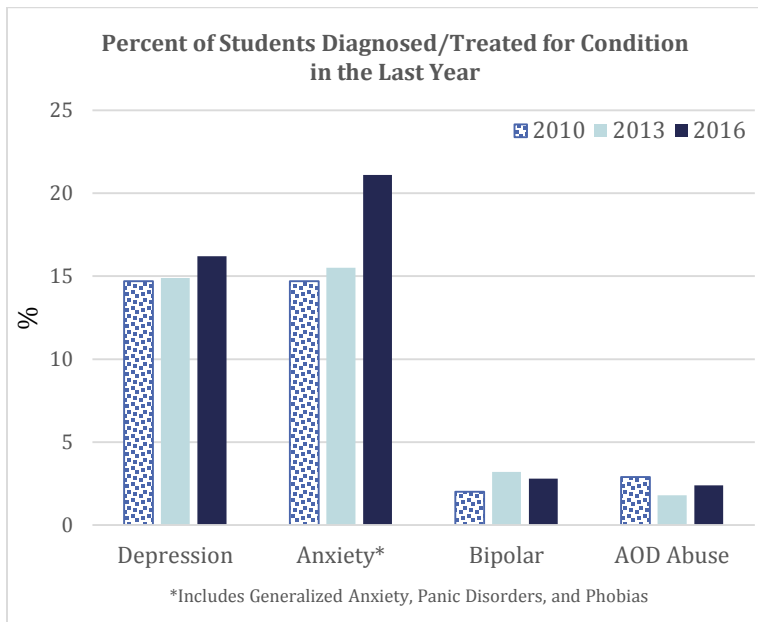
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Mental Health

According to the National Alliance on Mental Health *1 in 5 adults, 43.8 million people, experience mental illness in a given year.*¹¹ The two most common mental health conditions are depression and anxiety. Moreover, colleges have seen an increase in the numbers of students seeking help for mental health.¹²

DIAGNOSES/TREATMENT

In this section we report the six-year trends in mental health conditions among Moorpark College students. Given the high comorbidity of mental illness and substance abuse due to users “self-medicating” mental illness⁹, we also looked at the proportion of students who reported being told by a professional they were abusing alcohol or drugs and/or receiving treatment.



As you can see in the chart **Percent of Students Diagnosed/Treated for Condition in the Last Year**, *anxiety disorders have increased substantially among Moorpark students.* Over 20% of Moorpark College students report being treated for or diagnosed with an anxiety-type disorder in the past year, an increase of about 5-percentage points. More students also reported being diagnosed with or treated for depression, while both bipolar disorder and alcohol or drug abuse (AOD) have remained fairly stable.

2016

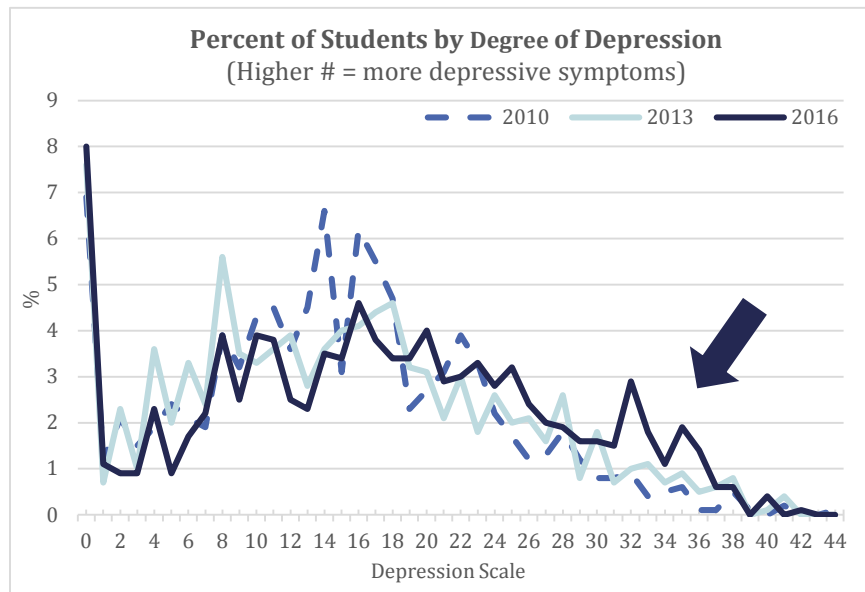
Anxiety disorders have increased substantially among Moorpark College students.

Over 20% of students reported they were treated for or diagnosed with an anxiety disorder in the last year.

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DEPRESSION

Three year trends show that depression is increasing among Moorpark students, and is increasing in *severity*. As seen in the chart **Percent of Students by Degree of Depression** (below), there is a considerable increase in the percent of students reporting symptoms of depression between scores 31-36 in 2016 (see arrow). This indicates that *more* students are experiencing *greater* symptoms of depression than in years past.



MEAN SCORES

The table below shows the Depression Scale mean scores over the last six years confirm this trend. Depression is increasing in severity among Moorpark students. Since 2010, the average score for depressive symptoms has increased by 2.4 points.

DEPRESSION SCALE, MEAN SCORES (0-44)

YEAR	MEAN	STANDARD DEVIATION
2010	14.7	8.6
2013	15.1	9.6
2016	17.1	10.1

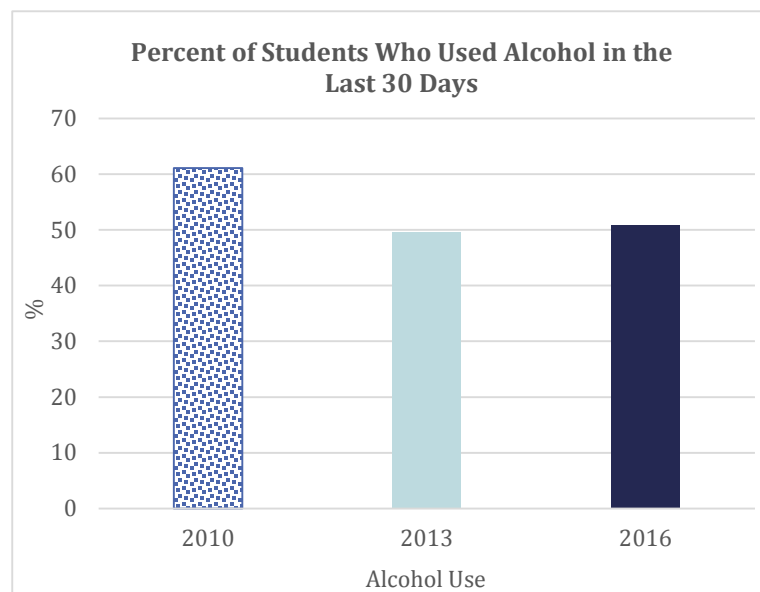
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Substance Use

Although there has been an increase in the percentage of students who report anxiety, Moorpark College has seen a reduction in the number of students who use alcohol. As shown in the chart **Percent of Students Who Used Alcohol in the Last 30 Days**—the percentage dropped to just half of students (50.8%), a decrease of 10 percentage points over six years.

Both *methamphetamine* and *cocaine* use among Moorpark students have not changed over the last six years (not shown in chart). Less than 1.5% of Moorpark students reported using either drug in the last 30 days, with methamphetamine being used by the fewest students (just 0.1%).

Due to the very small number of students reporting recent use of methamphetamine or cocaine, or having an addiction to alcohol or drugs, we were *unable to conduct statistical tests* to determine if substance abuse is associated with students using substances in the past 30 days.



Just as many who suffer from mental health conditions are also substance abusers (co-morbidity), many also suffer from insomnia. Sleeping problems can both magnify existing mental health problems and trigger episodes of depression or psychoses. In contrast, sufficient sleep contributes greatly to the physical and mental health of a person, and supports academic performance.

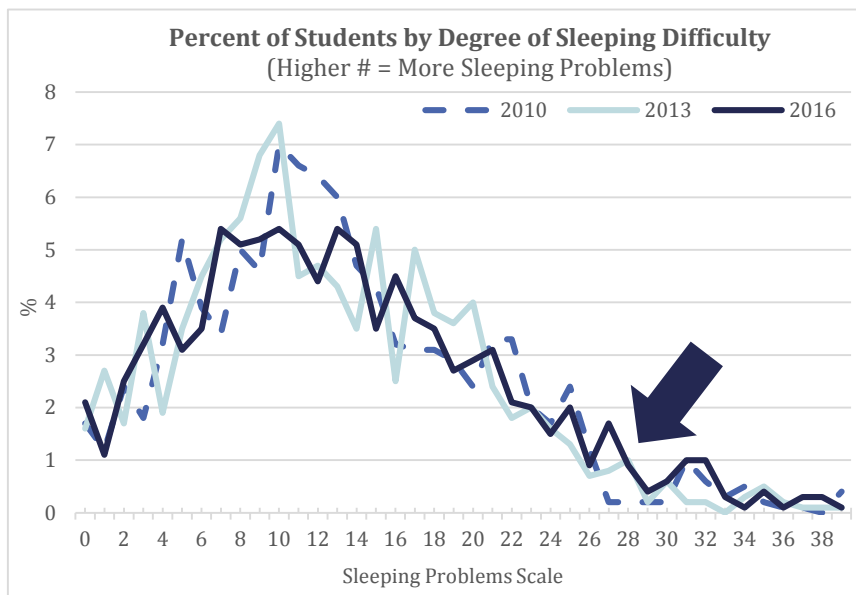
In the next section we discuss the state of sleeping problems among Moorpark College students.

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Sleeping Problems

Inadequate or poor sleep has been linked to poor student success. In addition, sleeping difficulty is associated with increased risk for anxiety or making existing anxiety worse.¹⁰ Thus, we looked at the degree of sleeping difficulty. This scale combines a number of questions related to sleeping problems, with a higher score equating to more frequent/severe sleeping difficulty.

Overall the same general pattern of sleeping problems among Moorpark students has repeated itself as in previous years. However, there is a slight increase in sleeping problems as seen by the increase in scores around 27 and 31-32 shown in the chart **Percent of Students by Degree of Sleeping Difficulty** (see arrow). In other words, the increase is in more students experiencing more severe sleeping problems. Additionally, there is a *decline* in the percent of students who report *fewer* sleeping problems (see scores 7-15).



MEAN SCORES

The table to the right shows mean scores for sleeping problems over the last six years. Sleeping problems among Moorpark students have remained fairly stable, hovering around 13, with a slight increase in the average and a greater variance in scores.

SLEEPING PROBLEMS SCALE, MEAN SCORES (0-39)

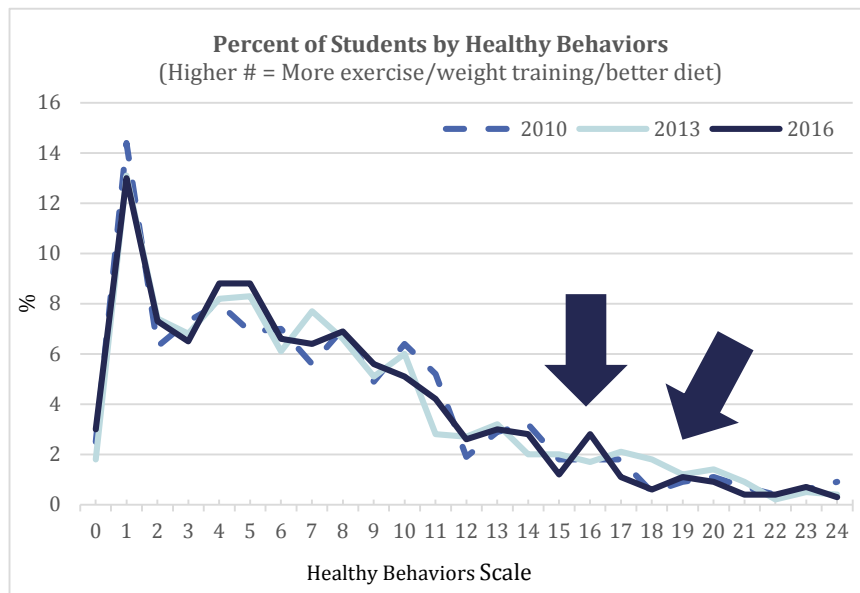
YEAR	MEAN	STANDARD DEVIATION
2010	13.2	7.4
2013	12.8	7.3
2016	13.4	7.8

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Healthy Behaviors

Just as mental illness affects student outcomes, so does physical health. We want our students to be healthy, thriving individuals who are primed for academic success. As previously discussed, physical activity is critical for cognitive function and learning.

In order to assess student's healthy behaviors we created a scale which combines four questions on weight lifting, moderate exercise, vigorous exercise, and consumption of fruits and vegetables. The higher the score, the more healthy behaviors that students exhibit. The chart below, **Percent of Students by Health Behaviors**, shows that *overall students' healthy behaviors retain the same general trend over the last six years*. Looking more closely we can see that there is a slight decline in healthy behaviors among Moorpark College students compared with years past, noting the peak at 16 and decline between scores 18-21 (see arrows).



MEAN SCORES

The table **Healthy Behaviors Scale, Mean Score** gives us a picture of the average student at Moorpark College—mean score dropping below what it was in 2010.

HEALTHY BEHAVIORS SCALE, MEAN SCORES (0-24)		
YEAR	MEAN	STANDARD DEVIATION
2010	7.2	5.4
2013	7.5	5.4
2016	6.9	5.2

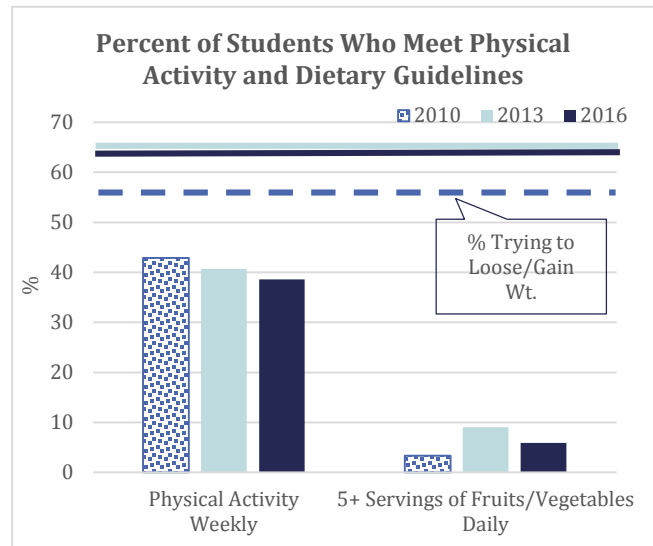
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One aspect of emotional and mental health is how one feels about their appearance—students who are unhappy with their appearance and are trying to lose or gain weight may be more depressed. Moreover, endorphins released while exercising act like a natural anti-depressant. Since we know that regular physical activity and a healthful diet are necessary to change one’s body, we looked at the relationship between diet and exercise, and goals among our Moorpark students.

We begin with the physical activity and dietary guidelines set forth by the American College of Sports Medicine and the American Heart Association.

The percent of students who meet the physical activity guidelines has continued to decline, down to just 38.6% in 2016. Similarly, the percent of students who eat the recommended 5 or more servings of fruits and vegetables each day has declined since 2013.

The chart **Percent of Students Who Meet Physical Activity and Dietary Guidelines** also shows that *students’ behavior does not match their goals*. While in 2010 the gap was smaller between those who were satisfied with their body and met physical activity and dietary guidelines, the gap has continued to widen—in 2016 65% of students reported they wanted to lose or gain weight (see solid dark line).



Students’ behavior does not match their goals of losing or gaining weight. Physical activity and eating fruits and vegetables have declined. Students may need help reaching their goals.

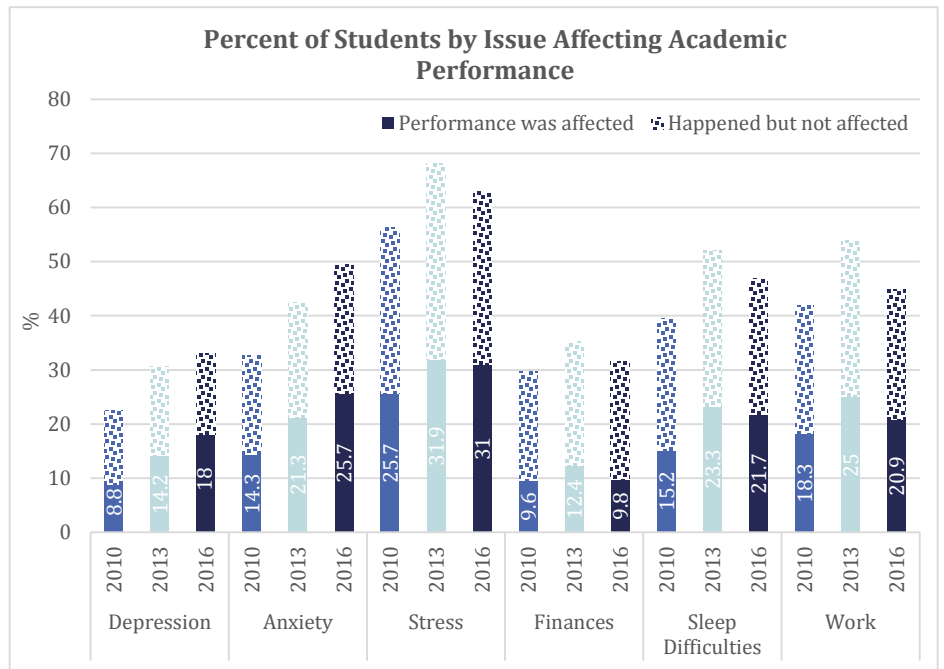


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Academic Performance

Student Success is a priority and core value of Moorpark College. By the nature of being a higher education institution, it is integral to who we are. Each of the health issues we have looked at in this survey are important because they can interfere with *student learning* and *impact student success*. This survey also asked students whether they experienced various health and life issues and if they felt it affected their academic performance.

Given the commitment of Moorpark College to the success of our students, we looked at how some key these issues and student perception of their effect on academic performance. As shown in the chart **Percent of Students by Issue Affecting Academic Performance** we can see that *stress* continues to be the issue of greatest concern for our students—with over 60% reporting that they dealt with stress in 2016, of which, 31% reported that it affected their academic performance.



A GROWING NUMBER OF STUDENTS FEEL THEIR ACADEMIC PERFORMANCE WAS AFFECTED BY THEIR DEPRESSION OR ANXIETY THAN IN PREVIOUS YEARS.

While stress and life issues (stress, finances, work, and sleep difficulties) were the big concern in 2013, this has improved and now the growing concern is depression and anxiety. Over the last six years, *more students have experienced depression or anxiety, and more students report their academic performance was affected* (depression, 18%, anxiety, 25.7%).

This is consistent with other findings in this report. The greatest concern is the clear upward trend—a growing number of students feel their academic performance was affected by their depression or anxiety.

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Conclusions

SUCSESSES

We have seen success in the area of fewer students **drinking alcohol** in the last 30 days, a drop of 10 percentage points since 2010. This is an impressive improvement!

We also continue to have a very small number of students who use **cocaine or methamphetamine**—consistent with national figures—however, this should be taken with caution. It is possible that this is underreported due to the sensitive nature of using an illicit drug.

Students' **problems with sleeping** remain about the same. While there has been a decline in the percentage of students with sleeping problems in the mid-range, and a greater percentage with more severe sleeping problems, the trends follow the same general pattern.

CHALLENGES

Mental health on the campus of Moorpark College is a significant concern. A growing number of Moorpark students have been diagnosed with **depression and/or anxiety**.

In addition, more students have recently experienced depression and/or anxiety and a growing number felt that their **academic performance was affected** by the condition. When we consider Student Success this is a critical issue to be addressed. While this is based upon student perceptions and has not been validated, it is clearly an issue in the eyes of students.

Students also have **declining healthy behaviors**. Fewer students are getting the recommended weekly amount of physical activity and daily 5 servings of fruits and vegetables, than in years past. There is also a growing gap between those who want to loose/gain weight and those who are maintaining a healthy lifestyle to reach those goals.

Overall, *stress continues to be the number one issue facing our Moorpark students*. While this is of concern in and of itself, the growing concern is in the area of depression and anxiety as the two are on the steady incline affecting the academic performance of our students.

RECOMMENDATIONS

Based upon our analysis we provide a few recommendations for consideration.

- The increase in depression and anxiety diagnoses as well as experiences affecting academic performance warrant greater staff available for counseling and psychological education.
- Students would benefit from more education and motivating programs to promote physical activity, weight training, and eating a healthful diet including fruits and vegetables.

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- Students need healthier food choices on campus. Consider adding additional food trucks which would carry salads, fruits, vegetables, and lean protein.
- We do not know enough about the type of stress that our students are dealing with—it would be worth investigating this further to learn how we may better help. For example, while we have stress management learning opportunities through the Student Health Center, students/families may need more education on how to support your new college student, balancing parental roles with increasing independence of the student. Additionally, many of our students work and may find it very difficult to manage time and may feel overwhelmed working and going to school.

Methodology

The data in this report are drawn from the National College Health Assessment II survey completed by our Moorpark College students in the Spring of 2010, 2013, and 2016. The assessment is conducted once every three years.

SAMPLE

This past spring, 2016, 1,204 students of 13,494 (8.9% response rate) completed the survey. In 2013, there was a response rate of 4.8% (642/13,482) and in 2010 the response rate was 5.3% (848/16,147). The survey was analyzed using SPSS v. 23. The data presented in this report are weighted to adjust for the overrepresentation of females (i.e., more females completed the survey than the proportion of females enrolled at Moorpark College).

SCALES

Three scales are calculated which include all relevant items and gives students an additional point for every positive action, or negative response, depending on the scale.

Depression Scale—11 items scored from 0-4, indicating symptoms of depression. Scores on the scale range from a minimum of 0 to a maximum of 44. A higher score equals more symptoms and/or symptoms which are more severe/frequent.

Sleeping Problems Scale—6 items scored from 0-7, indicating sleeping difficulty. Scores on the scale range from a minimum of 0 to a maximum of 42. A higher value equals more symptoms and/or symptoms which are more severe/ frequent. A higher score equals more sleeping difficulty and/or problems which are more frequent.

Healthy Behaviors Scale—3 items scored 0-7, indicating more weekly physical activity or weight training, and 1 item scored 0-3, indicating more servings of fruits and vegetables consumed per day. Scores on the scale range from a minimum of 0 to a maximum of 24. A higher value equals more healthy behaviors and/or more frequent activity.

Additionally, a variable was created to indicate students who meet weekly **physical activity guidelines**. This was calculated according to the recommendations provided by the Academy College of Sports Medicine and the American Heart Association, factoring in combinations of vigorous and moderate physical activity.

STATISTICAL TESTS

Correlation tests were conducted on a few items to determine if there was a statistically significant relationship. Otherwise, the analysis presented in this report does not include statistical tests, just descriptive statistics.

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