HEALTH AND HEALTH-RELATED BEHAVIORS
Minnesota Postsecondary Student Veterans
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Introduction

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

- Health Insurance and Health Care Utilization
- Mental Health
- Tobacco Use
- Alcohol and Other Drug Use
- Personal Safety and Financial Health
- Nutrition and Physical Activity
- Sexual Health

A: They all affect the health and academic achievement of all students including military veterans returning to college.
In August 2009, when the Post-9/11 Veterans Educational Assistance Act of 2008 takes effect, more than 2 million veterans will have access to affordable college education benefits. The bill's passage and subsequent influx of military veterans on college campuses present both a challenge and an opportunity for educational communities to serve veterans in their transition from service member to student.

For educational institutions to meet the needs of student veterans, awareness of the issues unique to this group must be identified. Over the past four years Boynton Health Service has worked with two- and four-year public and private postsecondary institutions to gather quality data that provide insights into the health and well-being of students attending these schools. In spring 2008, Boynton Health Service in partnership with Minnesota State Colleges and Universities conducted a comprehensive survey of a randomly selected group of college students attending 14 Minnesota two- and four-year public and private schools. To gather information specific to veterans attending college, all 1,900 veterans enrolled at and identified by these 14 institutions and the University of Minnesota (1,901 veterans) were also invited to complete the survey.

This report presents the health and health-related behavior data collected from veterans attending the 15 colleges and universities that participated in the spring 2008 College Student Health Survey. Boynton Health Service and Minnesota State Colleges and Universities administrators hope the information in this report will help identify issues pertinent to and affecting student veterans and assist college and university leaders in their efforts to develop programs to address the unique needs of veterans enrolled in their schools.

To date, limited information about the health of veterans and no information about the health of veterans enrolled in postsecondary institutions has been gathered. This report presents the results of the data collected from veterans and not Boynton Health Service's interpretation of the information. In many instances, comparison data based on the aggregate student population that also completed the 2008 College Student Health Survey is included. The general student data are included solely for comparison; the student data have been adjusted to account for the gender and age differences between the veterans and the student population. For unadjusted prevalence rates for the aggregate student population, please refer to the following report: Health and Health-related Behaviors, Minnesota Postsecondary Students.

The information in this report highlights the health and health-related behaviors of veterans currently enrolled in a Minnesota college or university. These results should not be extrapolated to veterans not currently enrolled in a postsecondary institution. Veterans enrolled in a college or university may be at very different points in their transition back to civilian life and therefore may have prevalence rates that are not comparable to veterans not currently enrolled in a postsecondary institution. Finally, additional data analysis to examine whether veteran health profiles differ from those of the general student population is planned.
Survey

Methodology

In spring 2008, 14 two-year and four-year Minnesota postsecondary schools joined with the University of Minnesota Boynton Health Service to collect information from 25,077 undergraduate and graduate students about their experiences and behaviors in the following areas: health insurance and health care utilization, mental health, tobacco use, alcohol and other drug use, personal safety and financial health, nutrition and physical activity, and sexual health. In conjunction with this survey, 1,901 students attending one of these 14 schools or the University of Minnesota-Twin Cities and identified as veterans of the United States Armed Forces were also included in the survey. Because the survey responses were anonymous, the final veteran participation rate is based on self-reported veteran status.

As an incentive, veterans and 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.

2008 College Student Health Survey Postcard
Survey

Analysis Summary

The information presented in this report documents the prevalence of various diseases, health conditions, and health-related behaviors across seven areas:

- Health Insurance and Health Care Utilization
- Mental Health
- Tobacco Use
- Alcohol and Other Drug Use
- Personal Safety and Financial Health
- Nutrition and Physical Activity
- Sexual Health

The prevalence of a disease, health condition, or health-related behavior is defined as the total number of occurrences in a population (in this case, veterans attending college) at a given time, or the total number of occurrences in the population divided by the number of individuals in that population.

Prevalence is useful because it measures how common a disease, health condition, or health-related behavior is. For example, the 2008 College Student Health Survey asked all students if they had ever been diagnosed with depression within their lifetime. For the purpose of this illustration, if 8,118 students completed the survey and 1,936 of them reported they had been diagnosed with depression within their lifetime, then the lifetime prevalence of depression among this population of students would be approximately 24.0% (1,936/8,118).

The results presented in this report are the actual rates reported among the veterans who participated in the survey. In addition, comparison survey data collected from the general student population have been included. However, the comparison data do not reflect the actual rates reported among the student population. Instead, the comparison data are adjusted to correct for the differences in age and gender between veterans and the student population. The veteran survey sample comprises approximately 25% females and 75% males, with an average age of 29.5 years, while the aggregate student survey sample comprises approximately 69% females and 31% males, with an average age of 26.3 years. The student population survey sample was adjusted to reflect the gender and age distribution of the veteran survey sample. This adjustment creates a more accurate comparison group for viewing the veteran data.

As noted previously, the student population survey results presented in this report are adjusted results; they are not the prevalence rates of the student population. For the unadjusted prevalence rates for the student population, please refer to the following report: Health and Health-related Behaviors, Minnesota Postsecondary Students.
Results

Health Insurance and Health Care Utilization

This section examines the areas of health insurance, health services utilization, and preventive care. Recent research indicates that most young adults in the United States, ages 18 to 24 years old, report good health. The majority of young adults in Minnesota (89.0%) and nationwide (84.2%) report excellent, very good, or good health. At the same time, young adults have relatively low rates of enrollment in health insurance and low rates of preventive care utilization. Among individuals under age 65, 18- to 24-year-olds are the least likely to have health insurance: in Minnesota 77.4% report some kind of health care insurance, and nationwide the number is 71.9%. More young males (31.1%) than young females (25.1%) lack health insurance coverage. Among all age groups, young adults (70.8%) are least likely to identify a regular place for medical care.

Information related to health care access among veterans is severely limited. Himmelstein published a study in 2007 documenting that in 2004, 1,768,377 United States veterans had no health insurance and were not being cared for within the Veterans Administration. According to his study, 12.7% of working-age veterans lack health coverage. Among these uninsured veterans, 51.4% had no regular source of care (compared to 8.9% of insured veterans) and 26.5% reported failing to get needed care because of the cost (compared to 4.3% of insured veterans).
Veterans who completed the 2008 College Student Health Survey report an overall uninsured rate of 18.6%, which is higher but not statistically different than the overall uninsured rate obtained from the adjusted aggregate data from all students who completed the survey (17.5%). Female veterans have a higher uninsured rate compared to all females who completed the survey (18.4% vs. 12.4%, respectively, p<0.05).

Veterans ages 25-29 report the highest uninsured rate. The highest uninsured rate obtained from the adjusted aggregate data from all students who completed the 2008 College Student Health Survey also occurs among those ages 25-29. Veterans ages 20-24 report a higher uninsured rate than all students within the same age group (16.4% vs. 11.8%, respectively, p<0.05).

Slightly more than one-half (50.6%) of all veterans report having a spouse, and 12.0% of these veterans report that their spouse is uninsured. The adjusted aggregate data indicate that slightly less than one-half (48.8%) of all students report having a spouse, and 13.2% of these students report that their spouse is uninsured.

Almost one-third (32.0%) of veterans who completed the survey report having dependent children. Of these dependent children, 7.3% lack health insurance. In comparison, the adjusted aggregate data show that 29.9% of all students report having dependent children, and 7.6% of these dependent children lack health insurance.
Number of sick days is a measure of health-related quality of life. Sick days reflect a personal sense of poor or impaired physical or mental health, or the inability to react to factors in the physical and social environments. 3

Among veterans who completed the survey, those with health insurance report on average 0.3 fewer sick days in the past 30 days than those without health insurance. The adjusted aggregate survey data obtained from all students show that those with health insurance report significantly fewer sick days in the past 30 days than those without health insurance (p<0.0001).

Among veterans who completed the 2008 College Student Health Survey, the primary locations for obtaining many health care services appear to be a community clinic and private practice. Among veterans who obtain the services, approximately one-tenth used their school’s health service for routine doctor’s visits (8.3%), testing for sexually transmitted infections (9.6%), and treatment for sexually transmitted infections (10.4%).

Examination of the adjusted aggregate data from all students who completed the survey shows that the primary locations for obtaining many health care services are also a community clinic and private practice.
Analysis of the adjusted aggregate data shows that, compared to all students who completed the 2008 College Student Health Survey, veterans who completed the survey report obtaining flu shots and immunizations for hepatitis A, hepatitis B, and meningitis at higher rates (p<0.0001).

Compared to male veterans who completed the 2008 College Student Health Survey, female veterans report more days of poor physical health, more days of poor mental health, and more days when poor physical and/or mental health affected daily activities. Similar results were found in the adjusted aggregate data from all students who completed the survey.
Veterans who completed the 2008 College Student Health Survey were asked to report if they have been diagnosed with selected infectious acute illnesses within the past 12 months and within their lifetime.

The acute condition diagnosed most frequently within veterans’ lifetimes is strep throat. Overall, 53.2% of veterans report being diagnosed with at least one acute condition within their lifetime, and 9.5% report being diagnosed with at least one acute condition within the past 12 months.

The adjusted aggregate survey data obtained from all students show that 49.9% report they have been diagnosed with at least one acute condition within their lifetime, and 9.7% report being diagnosed with at least one acute condition within the past 12 months.

Chronic conditions are ongoing health concerns for veterans and all students. Surveillance of these conditions provides a picture of longer term health care needs for college students.

The most common chronic condition diagnosed in veterans who completed the 2008 College Student Health Survey is allergies. More than one-half (55.4%) of all veterans report being diagnosed with at least one chronic condition within their lifetime, and approximately one-fifth (21.7%) report being diagnosed with at least one chronic condition within the past 12 months.

The adjusted aggregate survey data obtained from all students show that 57.6% report being diagnosed with at least one chronic condition within their lifetime, and 21.9% report being diagnosed with at least one chronic condition within the past 12 months.

### Diagnosed With Acute Condition—Lifetime and Past 12 Months

<table>
<thead>
<tr>
<th>Acute Condition</th>
<th>Percent Who Report Being Diagnosed Within Lifetime</th>
<th>Percent Who Report Being Diagnosed Within Past 12 Months</th>
<th>p-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlamydia</td>
<td>5.8</td>
<td>3.6</td>
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<tr>
<td>Gonorrhea</td>
<td>1.7</td>
<td>1.3</td>
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<tr>
<td>Hepatitis A</td>
<td>0.1</td>
<td>0.3</td>
<td>ns</td>
<td>ns</td>
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<tr>
<td>Lyme Disease</td>
<td>0.9</td>
<td>0.9</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Mononucleosis</td>
<td>8.3</td>
<td>8.7</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Pubic Lice</td>
<td>3.3</td>
<td>3.3</td>
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</tr>
<tr>
<td>Strep Throat</td>
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<td>ns</td>
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<tr>
<td>Syphilis</td>
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<td>ns</td>
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<tr>
<td>Urinary Tract Infection</td>
<td>16.8</td>
<td>14.1</td>
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Diagnosed With At Least One of the Above Acute Conditions: Veterans 53.2%, All Students–Adjusted Data 49.9%.

### Diagnosed With Chronic Condition—Lifetime and Past 12 Months

<table>
<thead>
<tr>
<th>Acute Condition</th>
<th>Percent Who Report Being Diagnosed Within Lifetime</th>
<th>Percent Who Report Being Diagnosed Within Past 12 Months</th>
<th>p-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol Problem</td>
<td>9.5</td>
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<td>Allergies</td>
<td>33.4</td>
<td>37.9</td>
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<tr>
<td>Asthma</td>
<td>9.8</td>
<td>14.4</td>
<td>&lt;0.001</td>
<td>&lt;0.01</td>
</tr>
<tr>
<td>Cancer</td>
<td>1.5</td>
<td>1.5</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Diabetes Type I</td>
<td>0.2</td>
<td>1.0</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Diabetes Type II</td>
<td>1.2</td>
<td>1.0</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Genital Herpes</td>
<td>2.5</td>
<td>1.6</td>
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</tr>
<tr>
<td>Genital Warts/Human Papilloma Virus</td>
<td>8.0</td>
<td>4.5</td>
<td>&lt;0.001</td>
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</tr>
<tr>
<td>Hepatitis B</td>
<td>0.4</td>
<td>0.5</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Hepatitis C</td>
<td>0.6</td>
<td>0.5</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>High Blood Pressure</td>
<td>7.7</td>
<td>9.0</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>High Cholesterol</td>
<td>11.6</td>
<td>10.9</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>HIV/AIDS</td>
<td>0.2</td>
<td>0.3</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Drug Problems (Other Than Alcohol)</td>
<td>3.5</td>
<td>4.6</td>
<td>ns</td>
<td>&lt;0.05</td>
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<tr>
<td>Obesity</td>
<td>7.0</td>
<td>7.9</td>
<td>ns</td>
<td>ns</td>
</tr>
<tr>
<td>Tuberculosis</td>
<td>0.7</td>
<td>0.9</td>
<td>ns</td>
<td>ns</td>
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Diagnosed With At Least One of the Above Chronic Conditions: Veterans 55.4%, All Students–Adjusted Data 57.6%.

**Notes:**
- ns Not statistically significant.
Results
Mental Health

This section examines areas related to the mental and emotional status of college and university students. Recent research shows that young adults in the United States have relatively high rates of mental health problems compared to other age groups. Based on the results of the National Comorbidity Survey Replication Study using the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders-IV criteria, 53.8% of 18- to 29-year-olds have been diagnosed with a mental disorder within their lifetime, and 38.0% of 18- to 29-year-olds have been diagnosed with a mental disorder within the previous year. Among all age groups, 18- to 25-year-olds have the highest lifetime prevalence of serious psychological distress, i.e., mental illness that results in functional impairment (17.7%), and the highest past year prevalence of major depressive episode (9.0%). The lifetime prevalence of major depressive episode for 18- to 25-year-olds is 15.0%. More than one in ten (10.8%) young adults between the ages of 18 and 25 have received treatment for a mental health problem in the previous year.

As a group, veterans may face an even greater challenge in making the adjustments necessary to succeed in college. For some veterans there may be some lingering psychological issues related to their military service, which affect their mental well-being. A recent Department of Defense Task Force report documented that among U.S. troops returning from Iraq and Afghanistan, nearly 40.0% of soldiers, one third of Marines, and one half of National Guard members report symptoms of psychological problems. Some veterans choose to struggle with their mental health issues in isolation due to concern over the stigma associated with disclosing mental health symptoms and asking for help within the military culture. Offering resources to all students struggling with mental health problems is important, whether or not these students are veterans. However, the unique life experiences of veterans require colleges to think critically about the types of programs and services they offer and whether they meet the particular needs of veterans.

A report published in 2006 presents the results of a population-based analysis of 303,905 Army and Marine troops who completed a Post-Deployment Health Assessment between May 2003 and April 2004. The report documented that 19.1% of Operation Iraqi Freedom (OIF) veterans and 11.3% of Operation Enduring Freedom (OEF) veterans reported some mental health issue (e.g., anxiety, depression, and post-traumatic stress disorder) and 9.8% of OIF veterans and 4.7% of OEF veterans reported symptoms of post-traumatic stress disorder. In addition, the mental health symptoms that many soldiers experience often increase three or four months after their return.
For veterans who completed the 2008 College Student Health Survey, depression, anxiety, and post-traumatic stress disorder are the most frequently reported mental health diagnoses within their lifetime. The adjusted aggregate data show that compared to all students who completed the survey, veterans have similar diagnosis rates for most mental health conditions within their lifetime. However, male and female veterans report being diagnosed with post-traumatic stress disorder at higher rates than all male and female students who completed the survey, and female veterans have a higher rate of bipolar disorder diagnosis than all female students.

The most frequently reported mental health diagnoses within the past 12 months for veterans who completed the survey are depression, anxiety, and post-traumatic stress disorder. Compared to all male students who completed the survey, male veterans have similar diagnosis rates for most mental health conditions within the past 12 months. However, male veterans report a higher rate of post-traumatic stress disorder diagnosis compared to all male students who completed the survey. Female veterans report being diagnosed with anxiety, bipolar disorder, depression, and post-traumatic stress disorder within the past 12 months at higher rates than all female students.
Among all veterans, 33.1% report being diagnosed with at least one mental health condition within their lifetime. Female veterans report a higher rate of being diagnosed with a mental health condition within their lifetime compared to male veterans (p<0.0001). The adjusted aggregate survey data show that female veterans have a higher but not statistically different rate of being diagnosed with any mental health condition within their lifetime compared to all female students.

Female veterans report a higher rate of being diagnosed with a mental health condition within the past 12 months compared to male veterans (p<0.0001). The adjusted aggregate data show that female veterans have a higher rate of being diagnosed with any mental health condition within the past 12 months compared to all female students who completed the 2008 College Student Health Survey (p=0.01).
The most commonly experienced stressors among veterans who completed the 2008 College Student Health Survey are the death of someone close to them, excessive credit card debt, and lack of health care coverage. A total of 45.1% of veterans report experiencing one or two stressors within the past 12 months, and 22.7% report experiencing three or more stressors over that same time period. The adjusted aggregate data from all students who completed the survey show that 42.4% of all students report experiencing one or two stressors within the past 12 months, and 25.5% report experiencing three or more stressors within that same time period.

Over the same 12-month period, veterans who experienced three or more stressors tend to have significantly higher rates of current tobacco use (p<0.05), high-risk drinking (p<0.01), and credit card debt (p<0.0001) compared to veterans who experienced two or fewer stressors. The adjusted aggregate data obtained from all students who participated in the survey show the same relationship exists between reported number of stressors experienced and engagement in risk-taking behavior.
More than one-fifth (22.8%) of veterans who completed the 2008 College Student Health Survey report they are unable to manage their stress level. Additional analysis shows that 20.3% of male veterans and 30.0% of female veterans report they are unable to manage their stress level.

The adjusted aggregate survey data show that 22.5% of all students report they are unable to manage their stress level.

Unmanaged stress levels are associated with rates of diagnosis for various health conditions. For example, 16.0% of veterans with unmanaged stress levels report being diagnosed with anxiety within the past year compared to only 5.5% of veterans with managed stress levels reporting the same diagnosis (p=0.0001). The adjusted aggregate data show the same type of relationship between ability to manage stress and various health conditions among all students.

Differences in reported rates of post-traumatic stress disorder diagnosis exist among veterans. For both males and females, veterans who served in either Iraq or Afghanistan have higher past-12-month diagnosis rates of post-traumatic stress disorder compared to veterans who did not serve in Iraq or Afghanistan (p<0.01).

Among all veterans, 49.4% report they served in Iraq or Afghanistan.
Among veterans who completed the 2008 College Student Health Survey, females report being diagnosed with depression within their lifetime at more than two times the rate of males (p=0.0001). The adjusted aggregate survey data show that female veterans report being diagnosed with depression within their lifetime at a higher but not statistically different rate than all female students.

Female veterans report being diagnosed with depression within the past 12 months at more than three times the rate of male veterans (p<0.0001). Analysis of the adjusted aggregate data from the 2008 College Student Health Survey shows that female veterans report being diagnosed with depression within the past 12 months at a higher rate than all female students (p=0.01).

Overall, 10.5% of veterans who completed the 2008 College Student Health Survey report they currently are taking medication for depression. Female veterans report using medication for depression at more than two times the rate of male veterans (p<0.0001), which correlates with the higher depression diagnosis rates found among female veterans compared to male veterans. According to the adjusted aggregate survey data, this same gender difference is seen among all students.
Female veterans report a higher rate of medication use for mental health problems other than depression than male veterans (p<0.05). The rate among female veterans is higher but not statistically different than the rate among all female students, according to the adjusted aggregate survey data. Overall, 7.8% of veterans report being on medication for a mental health problem other than depression.

Among veterans who completed the 2008 College Student Health Survey, 0.5% of males and 3.4% of females report being diagnosed with anorexia and/or bulimia within their lifetime (p<0.01). The adjusted aggregate data obtained from all students who participated in the survey show that 0.7% of all males and 4.4% of all females report being diagnosed with anorexia and/or bulimia within their lifetime (p<0.0001).

More than half (53.7%) of all veterans report they received enough sleep so they felt rested when they woke up in the morning on three or fewer days over the previous seven days. The adjusted aggregate data show that 52.0% of all students who completed the 2008 College Student Health Survey report they received adequate sleep on three or fewer days over the previous seven days.
Receiving adequate sleep appears to affect veterans’ ability to manage their stress level. Only 54.8% of veterans who report receiving 0-1 day/week of adequate sleep also report the ability to manage their stress, whereas 90.8% of veterans who report 6-7 days/week of adequate sleep also report the ability to manage their stress (p<0.0001). A similar association between sleep and stress is seen in the adjusted aggregate survey data from all students.
Results

Tobacco Use

Recent research shows that current cigarette use by Americans of all ages peaks among young adults ages 21 to 25 at 40.2%, and 18- to 20-year-olds are not far behind at 35.6%. \(^8\) Approximately one in three (30.9%) full-time college students smoked cigarettes at least one time in the previous year, one in five (19.2%) smoked cigarettes at least one time in the previous 30 days, and one in ten (9.2%) smoke cigarettes daily. \(^13\) Among young adults ages 18 to 25, 5.2% used smokeless tobacco in the previous month. \(^8\) Current cigarette smokers are more likely to use other tobacco products, alcohol, or illicit drugs than nonsmokers. \(^8\) Among all current smokers, 42.5% have tried to quit and have stopped smoking for at least one day in the preceding 12 months. \(^14\) Of the 15 million college students in the United States, an estimated 1.7 million will die prematurely due to smoking-related illnesses. \(^15\) Clearly, the current level of tobacco use among college students poses a major health risk.

Several studies have documented higher rates of tobacco use among veterans compared to the civilian population. According to the Department of Veterans Affairs (VA) National Smoking and Tobacco Use Cessation Program directive, the prevalence of smokers in the VA is 33.0% compared to 23.0% in the general population. \(^16\) A National Survey on Drug Use and Health report estimates that 18.1% of veterans smoke cigarettes on a daily basis, compared to 14.3% of nonveterans. \(^17\) In a study of U.S. military personnel serving in the first Gulf War, 7.0% of respondents indicated they started smoking for the first time and 56.0% of preexisting regular smokers stated they increased consumption while deployed. \(^18\)
The **current tobacco use** rate for all veterans who completed the 2008 College Student Health Survey is higher but not statistically different than the current tobacco use rate among all students who completed the survey (34.0% vs. 31.5%, respectively). Male veterans report a higher rate of current tobacco use compared to female veterans (36.9% vs. 25.6%, respectively, p<0.05).

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

The daily tobacco use rate for all veterans who completed the 2008 College Student Health Survey is higher but not statistically different than the daily tobacco use rate among all students who completed the survey (14.1% vs. 13.8%, respectively). The daily tobacco use rates are similar for male and female veterans (14.1% vs. 14.0%, respectively).

Overall, 12.8% of male veterans report using smokeless tobacco during the past 30 days compared to 1.0% of female veterans (p<0.0001). Analysis of the adjusted aggregate data from the 2008 College Student Health Survey shows that for both males and females, veterans and all students report using smokeless tobacco at similar rates.
Among those who report using smoking tobacco in the past 30 days, 43.3% of veterans compared to 42.1% of all students who completed the survey do not consider themselves smokers. Among those who do consider themselves smokers, 58.8% of veterans compared to 53.8% of all students made at least one attempt to quit smoking over the past 12 months. These veterans made an average of 3.6 quit attempts during that same 12-month period, while all students who consider themselves smokers made an average of 4.4 quit attempts.

Among veterans who report using tobacco over the past 30 days, the proportion who report smoking more than one pack of cigarettes per day increases from 10.5% on a weekday to 13.6% on a weekend day. The adjusted aggregate survey data from all students who currently use tobacco show that the proportion of students who report they smoke more than one pack of cigarettes per day increases from 11.8% on a weekday to 15.3% on a weekend day (p=0.001).

The average number of cigarettes smoked by veterans who are current tobacco users increases from 10.6 per weekday to 11.9 per weekend day. For daily tobacco users, the average number increases from 20.4 per weekday to 21.8 per weekend day. The adjusted aggregate survey data from all students also shows an increase in the average number of cigarettes smoked on a weekday versus weekend day for both current and daily tobacco users.
Veterans who used tobacco in the past 30 days report the most common locations of their use are in a car, where they live, in bars/restaurants, and at private parties. The most common locations obtained from the adjusted aggregate data from all students who completed the 2008 College Student Health Survey are the same as those cited by the veterans.

For veterans who are nonsmokers, bars/restaurants is the most commonly cited location for exposure to secondhand smoke. In a car is the most frequently reported location for exposure to secondhand smoke by veterans who are smokers. Less than one-half of all veterans (44.0%) report never being exposed to secondhand smoke. Adjusted aggregate data from all students who completed the survey show that 42.2% report never being exposed to secondhand smoke.

For veterans who are nonsmokers, the hours of exposure to secondhand smoke increase but are not statistically different from a weekday to a weekend day (25.3% vs. 29.7%, respectively).

The adjusted aggregate data from the 2008 College Student Health Survey show that the percentage of all nonsmokers who report they were exposed to secondhand also increases from a weekday to a weekend day (25.8% vs. 33.2%, respectively, p<0.0001).
Among veterans who are current smokers, exposure to secondhand smoke increases from a weekday to a weekend day but the difference is not statistically significant (50.2% vs. 57.5%, respectively).

The adjusted aggregate data from all students who completed the 2008 College Student Health Survey show a similar trend, with 50.9% of smokers reporting exposure to secondhand smoke on a weekday and 62.6% citing exposure on a weekend day (p<0.0001).

Veterans who use tobacco have a higher rate of high-risk drinking compared to veterans who are non-tobacco users (56.0% vs. 30.2%, respectively, p<0.0001).

This same relationship between tobacco use and high-risk drinking is seen in the adjusted aggregate data from all students who completed the 2008 College Student Health Survey.

**Definition:**

**High-Risk Drining**

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.

Similar to the relationship between high-risk drinking and tobacco use, the use of marijuana in the past 30 days is higher among veterans who are tobacco users (10.5%) compared to veterans who are non-tobacco users (2.4%) (p<0.0001).

A similar relationship between tobacco use and current marijuana use is seen in the adjusted aggregate data from all students who completed the survey.
The use of other illegal drugs is also associated with tobacco use. Veterans who are tobacco users use illegal drugs other than marijuana at more than twice the rate of non-tobacco users (10.2% vs. 4.5%, respectively, p<0.01).

The relationship between tobacco use and other illegal drug use seen in the adjusted aggregate data from all students who completed the survey is similar to that seen among the veterans.
Results
Alcohol Use and Other Drug Use

American college students consume alcohol and other drugs at very high rates. More than four in five (84.7%) college students have consumed alcohol at least one time, and nearly seven in ten (65.4%) college students consume alcohol monthly.\(^8\) Heavy or binge drinking (consuming five or more alcoholic beverages in a row in the previous two weeks) rates peak between ages 21 and 23 (49.3% at age 21, 48.9% at age 22, and 47.2% at age 23).\(^8\) The rate of binge drinking is 36.2% among 18- to 20-year-olds and 46.1% among 21- to 25-year-olds.\(^8\)

Approximately half (50.6%) of college students have used an illicit drug at least once in their lifetime, about one third (33.9%) have used an illicit drug at least once in the past year, and nearly one in five (19.2%) have used an illicit drug in the last month.\(^\) Marijuana is the illicit drug of choice for college students, with nearly half (46.9%) of students having used the drug at least once in their lifetime and almost one third (30.2%) having used it in the past year.\(^\) Among college students, 6.0% have used amphetamines, 5.1% have used cocaine, and 0.3% have used heroin in the previous year.\(^\)

The National Survey on Drug Use and Health, an annual survey sponsored by the Substance Abuse and Mental Health Services Administration, examined differences in alcohol and drug use among veterans and nonveterans in two separate reports released in November 2005. The rates of alcohol and marijuana use were higher among veterans compared to nonveterans. The report estimated a past-month alcohol use rate among veterans of 56.6%, compared to a rate of 50.8% among nonveterans, with 22.6% of veterans also reporting they consumed five or more drinks at one sitting over that same time period and 21.6% of nonveterans reporting having engaged in that same type of behavior.\(^\) The second report, which highlighted the use of marijuana and other illicit drugs, estimated the rates of marijuana use within the past 30 days to be 3.5% among veterans and 3.0% among nonveterans. The use of illicit drugs within the past 30 days was slightly lower among veterans than among nonveterans (1.7% vs. 1.9%, respectively).\(^\)
The rates for any use of alcohol in the past 12 months are similar for male and female veterans who completed the 2008 College Student Health Survey (87.1% vs. 87.9%, respectively).

The rate for any use of alcohol within the past year is significantly higher among veterans (87.3%) compared to the adjusted aggregate data from all students who completed the survey (82.5%) (p<0.001).

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

Among veterans who completed the 2008 College Student Health Survey, the rate for use of alcohol in the past 30 days is higher for males compared to females (79.0% vs. 70.5%, respectively, p<0.05). Analysis of the adjusted aggregate data shows that veterans report a higher rate of alcohol use within the past 30 days compared to all students who completed the survey (p<0.01).

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

Male veterans who completed the 2008 College Student Health Survey consume more than two times the number of drinks per week than female veterans consume (6.5 vs. 2.8, respectively, p<0.0001). The adjusted aggregate survey data from all students shows the same gender difference, with male students consuming a higher average number of drinks per week than female students (5.9 vs. 2.9, respectively, p<0.0001).
Male veterans report a higher rate of high-risk drinking compared to female veterans (43.3% vs. 26.5%, respectively, p<0.0001). Among all students who completed the 2008 College Student Health Survey, males report a higher rate of high-risk drinking compared to females (p<0.0001).

The high-risk drinking rate among veterans is slightly higher but not statistically different than the reported rate obtained from the adjusted aggregate data from all students (39.1% vs. 36.8%, respectively).

Among veterans who completed the 2008 College Student Health Survey, the peak years for engaging in high-risk drinking are between ages 21 and 24. Among all students who completed the survey, the peak years for engaging in high-risk drinking are also between ages 21 and 24.
The blood alcohol content of a student on the most recent socializing/partying occasion was calculated based on answers to four different survey questions (gender, current body weight, amount of alcohol consumed, and time period of consumption). It should be noted that the BAC calculated in this study is an estimate. This information is self-reported, and students tend to underestimate the actual amount of alcohol they consume.

The average estimated blood alcohol content for both male and female veterans who completed the 2008 College Student Health Survey, based on the last time they partied/socialized, is \textbf{0.07}.

For both males and females, the average estimated BAC levels obtained from the adjusted aggregate data from all students who completed the survey are similar to those reported by the veterans.

The average estimated BAC levels for veterans range from \textbf{0.04} to \textbf{0.10}. Veterans ages 21-26 and 29-30 all report estimated BAC levels that exceed the legal driving limit of 0.08 for individuals of legal drinking age.

The adjusted aggregate data from all students who completed the 2008 College Student Health Survey show that the average estimated BAC level ranges from \textbf{0.03} to \textbf{0.09}. 

Blood alcohol content (BAC) measures the percentage of alcohol in a person’s blood. The calculation of BAC is based on a simple formula that takes into account the following factors:

- Gender
- Current body weight
- Amount of alcohol consumed (number of drinks)
- Time period of consumption
- Concentration of alcohol in the beverage consumed (based on the alcohol content of one typical can of beer containing 4.5% alcohol)
More than one-fifth (21.9%) of all veterans report having driven a car while under the influence of alcohol or drugs. Among all veterans, 17.4% report missing a class and 17.8% report performing poorly on a test or project as a result of alcohol/drug use.

For the majority of the reported negative consequences, the difference in rates between veterans and the adjusted student data is not statistically significant.

A strong association exists between the average number of drinks veterans consumed per week and the total number of reported negative consequences they experienced over the past 12 months (p<0.001). An association also exists between engaging in high-risk drinking within the past two weeks and reported negative consequences (p<0.001).

The adjusted aggregate survey data from all students show the same relationships between average number of drinks consumed per week, engagement in high-risk drinking, and reported negative consequences.
Veterans were asked if they would call 911 when someone “passes out” due to alcohol/drug use and they are unable to wake the individual. In an example of a situation in which 911 must be called, 63.4% of all veterans report they would be “very likely” to call for emergency assistance.

According to the adjusted aggregate survey data, 61.3% of all students report they would be “very likely” to call for emergency assistance if they found someone passed out due to alcohol/drug use.

The rates for the negative consequences identified are generally three to five times higher among veterans who have engaged in high-risk drinking compared to veterans who have not engaged in high-risk drinking. Approximately two out of five (43.2%) veterans who have engaged in high-risk drinking have driven while intoxicated one or more times in the past 12 months.

Similar results are seen in the adjusted aggregate data from the 2008 College Student Health Survey, with 44.7% of all students who engage in high-risk drinking behavior also reporting they have driven while intoxicated within the past 12 months.

The rate for any marijuana use within the past 12 months is 10.6% for all veterans who completed the 2008 College Student Health Survey. This rate is lower than the past-12-month marijuana use rate reported among all students in the adjusted aggregate data (p<0.0001).

**Definition:**  
**Past-12-Month Marijuana Use**  
Any marijuana use within the past year.
The current marijuana use rate is lower among veterans compared to the rate obtained from the adjusted aggregate data from all students who completed the 2008 College Student Health Survey (5.2% vs. 10.3%, respectively, p<0.0001).

**Definition:**

**Current Marijuana Use**

Any marijuana use within the past 30 days.

The illicit drugs most commonly used by veterans are sedatives (4.6%), cocaine (1.7%), and ecstasy (1.1%). Among veterans, 6.4% report having used at least one of the nine listed illicit drugs.

Veterans have lower rates of using all other drugs except sedatives compared to all students in the adjusted aggregate survey data. Among all students, 7.3% report having used at least one of the listed illicit drugs within the past 12 months.
Results

Personal Safety and Financial Health

Though many efforts are made to reduce violence and victimization on campus, these unfortunate events still occur. Current data show that almost one in six (17.6%) women and one in 33 (3.0%) men in the United States have been victims of rape or attempted rape in their lifetime. Based on estimates by the National Institute of Justice, 20.0% of American women experience rape or attempted rape while in college, but fewer than 5.0% of college rape victims report the incident to the police.

Among females in the military the rates of exposure to sexual violence range from 43.0% for experiencing rape or attempted rape to 63.0% of females reporting they experienced physical sexual harassment.

Financial health is another area of concern. More than four in five (83.0%) college students in the United States have at least one credit card, and nearly one half (47.0%) have four or more credit cards. The average credit card debt per U.S. college student is $2,327. Unfortunately, research and statistics related to credit card use and credit card debt among veterans are lacking.

Gambling represents one possible obstacle to achieving and maintaining financial health. Gambling is a form of entertainment for many people. Approximately 68.0% of the U.S. adult population has gambled legally within the past year, and more than two fifths (41.9%) of college students report participating in some type of gambling activity in the previous school year. However, for some individuals, gambling becomes a problem. Nationally, between 1.6% and 3.4% of the general population may experience a gambling problem within their lifetime. The rates of problem gambling are even higher among veterans of a similar age, especially among veterans being treated for post-traumatic stress disorder.
Based on data from the 2008 College Student Health Survey, female veterans report experiencing sexual assault within their lifetime at a higher rate than male veterans (43.5% vs. 7.4%, respectively, p<0.0001). The rate for female veterans is significantly higher than the rate obtained from the adjusted aggregate data from all female students who completed they survey (43.5% vs. 29.8%, respectively, p=0.0001).

Similar to the gender difference seen in the rates of sexual assault within their lifetime, the past-12-month rate for experiencing a sexual assault is higher among female veterans than among male veterans (6.0% vs. 2.2%, respectively, p<0.05).
Domestic Violence—Lifetime
Veterans and All Students by Gender

Domestic violence is defined as answering yes to at least one of the following two questions:
Within your lifetime, 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?

Based on data from the 2008 College Student Health Survey, female veterans report experiencing domestic violence within their lifetime at a higher rate than male veterans (46.4% vs. 21.7%, respectively, p<0.0001). The rate for female veterans is higher than the rate obtained from the adjusted aggregate data from all female students who completed the survey (46.4% vs. 37.8%, respectively, p<0.05).

Domestic Violence—Past 12 Months
Veterans and All Students by Gender

Domestic violence is defined as answering yes to at least one of the following two questions:
Within 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?

The past-12-month rate for experiencing a domestic violence is also higher among female veterans than among male veterans (20.4% vs. 12.0%, respectively, p<0.01). Analysis of the adjusted aggregate data shows that female veterans report experiencing domestic violence at a higher rate than all female students who completed the survey (20.4% vs. 16.9%, respectively, p<0.0001).
The rates of depression diagnosis within their lifetime are higher for both veterans who report being victims of sexual assault (46.3%) and veterans who report being victims of domestic violence (32.7%) than for all veterans (21.4%). This same relationship between experiencing sexual assault or domestic violence and depression diagnosis is seen in the adjusted aggregate data from all students who completed the 2008 College Student Health Survey data.

Of the veterans who indicate they have experienced a sexual assault within their lifetime (16.6%), only 28.9% state they reported the incident. Of the veterans who reported the incident, 25.6% reported it to the police and 17.9% reported it to a health care provider.

According to the adjusted aggregate survey data, among all students who report they have experienced a sexual assault within their lifetime (12.4%), only 29.2% indicate they reported the incident.

More than one in seven (15.7%) veterans who completed the 2008 College Student Health Survey report being a theft victim within the past 12 months. Of those who report experiencing a theft, 67.7% cite the amount of the theft was $499 or less.

According to the adjusted aggregate survey data, 15.1% of all students indicate they were theft victims within the past 12 months.
Nearly one-third (32.4%) of veterans report they have immediate access to a firearm, 36.3% for males and 21.3% for females. The adjusted aggregate survey data show that 18.5% of all students report having immediate access to a firearm.

Among those who report having access to a firearm, veterans report a higher rate of access to a handgun compared to all students who completed the survey (65.8% vs. 46.4%, respectively, p<0.0001).

Male veterans are more likely to report having engaged in a physical fight over the past 12 months than female veterans but the difference is not statistically significant (10.9% vs. 7.2%, respectively).

The rate of engaging in a physical fight within the past 12 months is higher among veterans than among all students in the adjusted aggregate survey data (10.0% vs. 6.7%, respectively, p<0.001).

Among veterans who rode in a car, 92.5% report wearing a seatbelt always or most of the time while in the car. Only approximately two-thirds (68.9%) of veterans who rode a motorcycle report they wear a helmet always or most of the time while on the motorcycle.

According to the adjusted aggregate survey data, 91.0% of all students report wearing a seatbelt always or most of the time while in a car.
Nearly all (98.3%) veterans who completed the 2008 College Student Health Survey report having a smoke detector in their place of residence, whereas only 51.3% of veterans report having a carbon monoxide detector.

According to the adjusted aggregate survey data, 97.3% of all students report having a smoke detector in their place of residence, and 48.8% of all students report having a carbon monoxide detector.

More than two-fifths (41.7%) of veterans report experiencing at least one injury over the past 12 months. The injuries most commonly reported during this period are due to falls and miscellaneous causes.

Analysis of the adjusted aggregate data from the 2008 College Student Health Survey indicates that 38.9% of all students report experiencing at least one injury over the past 12 months.

### Injuries Sustained—Past 12 Months

<table>
<thead>
<tr>
<th>Type of Injury</th>
<th>Veterans</th>
<th>All Students—Adjusted Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assaulted by Another Person (Nonsexual)</td>
<td>3.3</td>
<td>2.2</td>
</tr>
<tr>
<td>Burned by Fire or a Hot Substance</td>
<td>5.9</td>
<td>5.4</td>
</tr>
<tr>
<td>Motor Vehicle Related</td>
<td>3.1</td>
<td>2.4</td>
</tr>
<tr>
<td>Team Sports</td>
<td>6.6</td>
<td>8.6</td>
</tr>
<tr>
<td>Individual Sports</td>
<td>9.2</td>
<td>7.4</td>
</tr>
<tr>
<td>Bicycle Related</td>
<td>2.0</td>
<td>1.4</td>
</tr>
<tr>
<td>In-line Skating</td>
<td>0.5</td>
<td>0.6</td>
</tr>
<tr>
<td>Skate Boarding</td>
<td>0.5</td>
<td>0.4</td>
</tr>
<tr>
<td>Falls</td>
<td>9.5</td>
<td>10.4</td>
</tr>
<tr>
<td>Other</td>
<td>17.6</td>
<td>14.6</td>
</tr>
<tr>
<td>Not Applicable—I Was Not Injured</td>
<td>58.3</td>
<td>61.1</td>
</tr>
</tbody>
</table>

*Not statistically significant.*
Almost three-fifths (56.8%) of all veterans report carrying some level of credit card debt over the past month, which is a rate similar to that found in the adjusted aggregate survey data among all students (55.1%). However, among those who report carrying some monthly credit card debt, veterans report a higher rate of carrying a debt of $1,000 per month or more compared to all students (80.0% vs. 73.2%, respectively, p<0.01).

**Definition:**

**Current Credit Card Debt**

Any unpaid balance at the end of the past month.

The rate of high credit card debt for veterans who completed the 2008 College Student Health Survey ranges from 36.6% among third-year students to 60.2% among fifth-year students.

The adjusted aggregate data from all students who completed the survey shows that the rate of high credit card debt ranges from 33.3% among second-year students to a high of 49.0% among fifth-year students.

**Definition:**

**High Credit Card Debt**

A monthly debt of $1,000 or more.

Veterans who carry high credit card debt work more hours for pay per week and have a higher rate of engaging in gambling than veterans who carry no or low credit card debt.

A similar trend exists among all students in the adjusted aggregate data, with lower rates of engaging in gambling and fewer hours worked for pay per week occurring among students who carry no or low credit card debt.
More than half (52.5%) of veterans who completed the 2008 College Student Health Survey report engaging in gambling over the past 12 months. According to the adjusted aggregate survey data, 51.6% of all students report engaging in gambling over the past 12 months.

Among those who report gambling within the past 12 months, 11.8% of veterans compared to 8.5% of all students who completed the survey report spending $100 or more per month (p<0.05).
Results

Nutrition and Physical Activity

Research shows that young adults in the United States generally eat fewer fruits and vegetables but are more physically active compared to older adults.\(^1\)\(^2\) Young adults between the ages of 18 and 24 (30.1%) are slightly less likely than all adults (32.6%) to eat fruits two or more times per day. Fewer young adults (20.9%) than all adults (27.2%) eat vegetables three or more times per day.\(^2\) Young adults between the ages of 18 and 27 report consuming breakfast an average of 3.1 days per week and consuming fast food an average of 2.5 days per week.\(^2\) The rate of obesity among young adults ages 18 to 29 is 17.7%.\(^2\)

Nationwide, nearly all young adults between the ages of 18 and 24 (89.1%) report participating in at least one physical activity during the last month; by comparison, the participation rate for all adults is 76.1%.\(^3\) Approximately three out of five (59.4%) 18- to 24-year-olds report engaging in at least 30 minutes of moderate physical activity five or more days per week or at least 20 minutes of vigorous physical activity three or more days per week; for all adults, the rate is 48.7%.\(^3\) Young adults 18 to 24 (40.0%) also are more likely to engage in at least 20 minutes of vigorous physical activity three or more days per week than all adults (27.4%).\(^3\)
Body mass index (BMI) is a common and reliable indicator of body fatness. BMI is based on a mathematical formula that takes into account both a person’s height and weight. BMI equals the weight in kilograms divided by the height in meters squared (BMI = kg/m²). The table to the right presents weight categories based on BMI ranges.

More than three-fifths (63.3%) of all veterans who completed the 2008 College Student Health Survey fall within the overweight and obese/extremely obese categories compared to 58.2% of all students who completed the survey (p<0.01). Calculated BMI is based on self-reported height and weight.

The average body mass index for male veterans is 27.2 compared to 25.8 for female veterans (p<0.0001). Both these averages fall within the overweight category. Approximately two-thirds (68.7%) of male veterans and nearly one-half (47.3%) of female veterans fall within the overweight or obese/extremely obese categories.

According to the adjusted aggregate survey data, the average BMI for all males is 27.3, and the average BMI for all females is 26.4.
As BMI increases, the proportion of veterans who report they are attempting to lose weight also increases.

This same relationship between BMI and reported effort to lose weight also exists in the adjusted aggregate data from all students who completed the 2008 College Student Health Survey.

Veterans were asked to report their engagement in any of the following activities in an attempt to control their weight: laxative use, diet pill use, and induced vomiting.

Compared to male veterans, female veterans engage in diet pill use and induced vomiting at significantly higher rates. This same gender difference is also found among all students who completed the 2008 College Student Health Survey.

Veterans classified as obese/extremely obese report the highest rates of laxative use, diet pill use, and induced vomiting in order to control weight gain.

Analysis of the adjusted aggregate data from the 2008 College Student Health Survey shows that students classified as obese/extremely obese report the highest rates of laxative and diet pill use.
As with other weight-related behaviors, female veterans who completed the 2008 College Student Health Survey engage in binge eating at a higher rate than male veterans (p=0.0001).

Examining the adjusted aggregate data from all students who completed the survey shows a similar gender difference in reported binge eating behavior.

The highest rate of reported binge eating behavior occurs among veterans classified within the obese/extremely obesity weight category.

According to the adjusted aggregate survey data, the highest rate of reported binge eating behavior among all students who completed the 2008 College Student Health Survey also occurs among those with BMIs that place them within the obese/extremely obese weight category.

Veterans with BMIs that place them within the overweight category have the highest rate of never eating breakfast within the past seven days. The highest rates of fast food consumption and eating at a restaurant at least once a week within the past 12 months are found among veterans classified as obese/extremely obese.

The adjusted aggregate data show that among all students who completed the 2008 College Student Health Survey, students classified as underweight have the highest rate of never eating breakfast within the past seven days.

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### Engagement in Binge Eating Behavior—Past 12 Months
Veterans by Gender

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>10.6</td>
</tr>
<tr>
<td>Females</td>
<td>21.7</td>
</tr>
</tbody>
</table>

### Engagement in Binge Eating Behavior—Past 12 Months
Veterans by BMI Category

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Underweight</th>
<th>Normal Weight</th>
<th>Overweight</th>
<th>Obese/Extremely Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 Days/Week</td>
<td>–</td>
<td>61.0</td>
<td>7.8</td>
<td>5.5</td>
</tr>
<tr>
<td>1-3 Days/Week</td>
<td>–</td>
<td>31.8</td>
<td>31.8</td>
<td>33.2</td>
</tr>
<tr>
<td>4-7 Days/Week</td>
<td>–</td>
<td>62.1</td>
<td>60.4</td>
<td>61.3</td>
</tr>
</tbody>
</table>

### Meal Patterns
Veterans by BMI Category

<table>
<thead>
<tr>
<th>Behavior</th>
<th>Underweight</th>
<th>Normal Weight</th>
<th>Overweight</th>
<th>Obese/Extremely Obese</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breakfast Consumption (Past 7 Days)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 Days/Week</td>
<td>–</td>
<td>6.1</td>
<td>7.8</td>
<td>5.5</td>
</tr>
<tr>
<td>1-3 Days/Week</td>
<td>–</td>
<td>31.8</td>
<td>31.8</td>
<td>33.2</td>
</tr>
<tr>
<td>4-7 Days/Week</td>
<td>–</td>
<td>62.1</td>
<td>60.4</td>
<td>61.3</td>
</tr>
<tr>
<td>Fast Food Consumption (Past 12 Months)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2 Times/Month or Less</td>
<td>–</td>
<td>57.5</td>
<td>50.7</td>
<td>39.3</td>
</tr>
<tr>
<td>Once/Week or More</td>
<td>–</td>
<td>42.5</td>
<td>49.3</td>
<td>60.7</td>
</tr>
<tr>
<td>Eat at Restaurant (Past 12 Months)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-2 Times/Month or Less</td>
<td>–</td>
<td>49.3</td>
<td>47.8</td>
<td>45.9</td>
</tr>
<tr>
<td>Once/Week or More</td>
<td>–</td>
<td>50.7</td>
<td>52.2</td>
<td>54.1</td>
</tr>
</tbody>
</table>

* Insufficient data.
Only 15.4% of all veterans consume fruits and vegetables five or more times per day. Male veterans consume fruits and vegetables on average 2.9 times per day, and female veterans consume them on average 3.3 times per day.

The adjusted aggregate survey data show that the average number of times per day fruits and vegetables were consumed is 2.9 times for all males and 3.0 times for all females.

Across all BMI categories, the majority of veterans (ranging from 84.3% of normal weight veterans to 85.1% of obese/extremely obese veterans) eat fruits and vegetables fewer than five times per day.

According to the adjusted aggregate survey data, the percentage of all students that eat fruits and vegetables fewer than five times per day ranges from 84.3% among obese/extremely obese students to 90.8% among underweight students.

Across all BMI categories, veterans report similar rates of daily consumption of regular soda. The number of students who consume regular soda on a daily basis does not reflect the actual quantity of soda consumed per day.

The adjusted aggregate survey data from all students shows that the rate of daily consumption of regular soda ranges from 22.3% among normal weight students to 34.7% among underweight students.
Students were asked several questions related to their physical activity level. The two survey questions that relate to recommendations outlined by the CDC (see CDC’s recommendations listed at right) are:

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

Based on their response to the two questions, students were classified into one of four physical activity levels (zero, low, moderate, or high). The moderate and high classifications meet the CDC’s recommended level of physical activity.

Approximately two-thirds (66.4%) of all veterans report levels of physical activity that place them in the moderate or high classification, meeting the CDC’s recommendations, compared to only 61.1% of all students who completed the survey (p<0.01).

For male veterans, average BMI decreases as physical activity level increases. Female veterans who engage in a moderate or high level of physical activity have lower average BMIs than female veterans who engage in a low level of physical activity.

According to the adjusted aggregate data, average BMI for male and female students who completed the 2008 College Student Health Survey decreases as physical activity level increases.
Results

Sexual Health

The majority of young adults in the United States are sexually active, with 68.1% of 18- to 19-year-old males, 75.2% of 18- to 19-year-old females, 84.4% of 20- to 24-year-old males, and 86.6% of 20- to 24-year-old females reporting they have had at least one sexual partner in the previous 12 months.\textsuperscript{32} Among 20- to 24-year-olds, 52.7% of males and 30.9% of females who have had sexual contact in the previous year used a condom during their last sexual contact.\textsuperscript{32} Due to a combination of behavioral, biological, and cultural reasons, sexually active young adults are at increased risk for acquiring sexually transmitted infections.\textsuperscript{33} The higher prevalence of sexually transmitted infections (STIs) among young adults is the result of multiple barriers to quality STI prevention services, including lack of health insurance, inability to pay, lack of transportation, and concerns about confidentiality.\textsuperscript{33}

Among 20- to 24-year-olds, 7.1% of males and 13.4% of females report having a sexually transmitted disease other than HIV within their lifetime.\textsuperscript{32} The prevalence of chlamydia is 2.8% in females and 0.7% in males who are between the ages of 15 and 24.\textsuperscript{33} Among all 15- to 24-year-olds, approximately 9.1 million cases of STIs and nearly 5,000 cases of HIV/AIDS are diagnosed annually.\textsuperscript{34}

Choices relating to sexual behavior have the potential for significant, and often long-term, consequences. So important is the issue of sexual health, that in 2001, the U.S. Surgeon General listed “responsible sexual behavior” as one of the ten leading health indicators for the nation.\textsuperscript{6}
Female veterans who completed the 2008 College Student Health Survey report a slightly higher but not statistically different rate of sexual activity within their lifetime compared to male veterans (95.7% vs. 94.2%, respectively).

The adjusted aggregate data collected from all students who completed the survey show that 89.5% of all students report engaging in sexual activity within their lifetime compared to 94.6% among veterans (p<0.0001).

Female veterans who completed the survey report a slightly lower but not statistically different rate of sexual activity within the past 12 months compared to male veterans (84.1% vs. 87.3%, respectively).

The adjusted aggregate data collected from all students who completed the 2008 College Student Health Survey shows that 82.1% of all students report engaging in sexual activity within their lifetime compared to 86.5% of veterans (p<0.01).

On average, veterans had 2.6 sexual partners over the past 12-month period compared to 2.1 sexual partners among all students who completed the 2008 College Student Health Survey (p<0.05). The average number of sexual partners is based on the experience of all veterans and students, both those who were sexually active and those who were not sexually active.
Among veterans who were sexually active within the past 12 months, more than four out of five (84.0%) report that their most recent sexual partner was either a fiancé(e)/spouse or an exclusive dating partner.

Similar to the data from veterans, the adjusted aggregate survey data show that 84.2% of all students report their most recent sexual partner was either a fiancé(e)/spouse or an exclusive dating partner.

According to the adjusted aggregate data, the rate of condom use during last vaginal intercourse was higher among all sexually active students than among sexually active veterans (p<0.05). The rates of condom use during last anal intercourse are similar among all students and among all veterans. The rate of condom use during last oral sex is lower among all students compared to veterans (p<0.05).

Of the 94.6% of veterans who report being sexually active within their lifetime, 95.0% engaged in vaginal intercourse, 89.8% engaged in oral sex, and 31.8% engaged in anal intercourse.
The most common methods that veterans report using to prevent pregnancy the last time they engaged in vaginal intercourse are birth control pills (45.3%) and condoms (36.0%). The withdrawal method is reported by 14.8% of veterans. Other methods of pregnancy prevention reported by veterans are identified in the table below.

The adjusted aggregate data from the 2008 College Student Health Survey shows that among all students, the most common methods used to prevent pregnancy the last time they engaged in vaginal intercourse are birth control pills (44.0%) and condoms (42.1%).

A total of 9.4% of veterans who completed the 2008 College Student Health Survey has been involved in a pregnancy within the past 12 months, which is similar to the 8.1% of all students who completed the survey. Of those involved in a pregnancy, 26.0% of veterans and 30.6% of all students state it was unintentional.

Among the unintentional pregnancies reported by veterans, 15.8% resulted in birth and parenting, 15.8% resulted in abortion, and 5.3% resulted in miscarriage. Among the unintentional pregnancies reported by all students who completed the survey, 26.3% resulted in birth and parenting, 24.0% resulted in abortion, 18.5% resulted in miscarriage, and 0.3% resulted in birth and adoption.
Within the past 12 months, 8.9% of sexually active female veterans have used emergency contraception. Among those who used emergency contraception, 78.7% have used it once within the past 12 months.

The adjusted aggregate survey data show similar use rates for female students: 9.3% of all sexually active female students report having used emergency contraception within the past 12 months, and 72.3% of those who have used emergency contraception used it one time.

Among veterans who have been sexually active within their lifetime, 18.7% report being diagnosed with a sexually transmitted infection within their lifetime compared to 12.4% of all students who completed the survey (p<0.0001). Genital warts/human papilloma virus (8.5%) and chlamydia (6.1%) are the two most commonly diagnosed sexually transmitted infections among veterans.

Analysis shows that a total of 3.5% of veterans who report having been sexually active within their lifetime also report having been diagnosed with a sexually transmitted infection within the past 12 months compared to 2.1% of all students who completed the survey (p<0.05).
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 health and health-related behaviors of veterans enrolled in the participating institutions. These data, therefore, offer a comprehensive look at the diseases, health conditions, and health-related behaviors that affect veterans attending Minnesota’s postsecondary schools. Identifying these health-related issues is critical because the health of veterans attending Minnesota’s colleges and universities affects their academic success.

Veterans attending college may have completed their military service or they may be students who put their education on hold to serve and are now returning to school. In either situation, they differ from the traditional students who recently graduated from high school. Veterans attending college are often balancing work and family responsibilities, while trying to navigate the college environment. It is crucial for colleges and universities to serve our veterans by creating an environment that addresses their specific needs, not the least of which are the health and health-related behaviors affecting their ability to succeed.

Addressing the needs of veterans attending postsecondary institutions provides them a way to become leaders in their new civilian lives. Like many veterans of previous wars who became leaders of our country, this next generation of veterans, if given the opportunity for academic success, will also aspire to great leadership roles. Veterans developed leadership skills through their military training. What veterans lack is the educational degree that opens a myriad of leadership opportunities. The transition from military life to civilian life is challenging. Creating a college environment that supports veterans during the transition, through coordinating services to address the academic, financial, physical, and social needs of veteran students, will reduce the stress of the transition and help veterans succeed academically.
Appendix 1
Colleges and Universities Participating in the 2008 College Student Health Survey

<table>
<thead>
<tr>
<th>Two-Year Schools</th>
<th>Location</th>
<th>Enrollment-Spring 2008*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Century College</td>
<td>White Bear Lake, MN</td>
<td>11,872</td>
</tr>
<tr>
<td>Hibbing Community College</td>
<td>Hibbing, MN</td>
<td>1,934</td>
</tr>
<tr>
<td>Inver Hills Community College</td>
<td>Inver Grove Heights, MN</td>
<td>7,644</td>
</tr>
<tr>
<td>Minnesota State Community and Technical College</td>
<td>Detroit Lakes, MN</td>
<td>7,642</td>
</tr>
<tr>
<td>Rochester Community and Technical College</td>
<td>Rochester, MN</td>
<td>7,791</td>
</tr>
<tr>
<td>South Central College</td>
<td>Faribault, MN</td>
<td>4,824</td>
</tr>
<tr>
<td>St. Cloud Technical College</td>
<td>St. Cloud, MN</td>
<td>5,053</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Schools with Two-Year and Four-Year Programs</th>
<th>Location</th>
<th>Enrollment-Spring 2008*</th>
</tr>
</thead>
<tbody>
<tr>
<td>The College of St. Catherine</td>
<td>Minneapolis, MN St. Paul, MN</td>
<td>4,907</td>
</tr>
<tr>
<td>Winona State University</td>
<td>Winona, MN</td>
<td>9,168</td>
</tr>
</tbody>
</table>

*Includes full-time and part-time students.
# Appendix 2

**2008 College Student Health Survey Demographics Based on Student Response**

<table>
<thead>
<tr>
<th></th>
<th>Veterans</th>
<th>All Students–Adjusted Data</th>
<th>All Students–Unadjusted Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average Age (Years)</td>
<td>29.5</td>
<td>29.3</td>
<td>26.3</td>
</tr>
<tr>
<td>Age Range (Years)</td>
<td>18-65</td>
<td>18-89</td>
<td>18-89</td>
</tr>
<tr>
<td>18-24 Years</td>
<td>31.7%</td>
<td>31.6%</td>
<td>60.8%</td>
</tr>
<tr>
<td>25 Years or Older</td>
<td>68.3%</td>
<td>68.4%</td>
<td>39.2%</td>
</tr>
<tr>
<td>Average GPA</td>
<td>3.32</td>
<td>3.33</td>
<td>3.32</td>
</tr>
</tbody>
</table>

## Class Status

<table>
<thead>
<tr>
<th>Class Status</th>
<th>Veterans</th>
<th>All Students–Adjusted Data</th>
<th>All Students–Unadjusted Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>First-Year Undergraduate</td>
<td>16.4%</td>
<td>14.1%</td>
<td>22.3%</td>
</tr>
<tr>
<td>Second-Year Undergraduate</td>
<td>19.0%</td>
<td>20.2%</td>
<td>21.2%</td>
</tr>
<tr>
<td>Third-Year Undergraduate</td>
<td>23.3%</td>
<td>20.9%</td>
<td>19.9%</td>
</tr>
<tr>
<td>Fourth-Year Undergraduate</td>
<td>17.4%</td>
<td>15.5%</td>
<td>15.0%</td>
</tr>
<tr>
<td>Fifth-Year Undergraduate</td>
<td>13.3%</td>
<td>15.5%</td>
<td>10.7%</td>
</tr>
<tr>
<td>Graduate or Professional</td>
<td>10.6%</td>
<td>13.8%</td>
<td>10.9%</td>
</tr>
</tbody>
</table>

## Gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>Veterans</th>
<th>All Students–Adjusted Data</th>
<th>All Students–Unadjusted Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>74.4%</td>
<td>74.6%</td>
<td>30.8%</td>
</tr>
<tr>
<td>Female</td>
<td>25.5%</td>
<td>25.4%</td>
<td>69.0%</td>
</tr>
<tr>
<td>Transgender/Other</td>
<td>0.0%</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
<tr>
<td>Unspecified</td>
<td>0.1%</td>
<td>0.0%</td>
<td>0.1%</td>
</tr>
</tbody>
</table>

## Ethnic Origin

<table>
<thead>
<tr>
<th>Ethnic Origin</th>
<th>Veterans</th>
<th>All Students–Adjusted Data</th>
<th>All Students–Unadjusted Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>African American/Black</td>
<td>3.1%</td>
<td>6.0%</td>
<td>3.9%</td>
</tr>
<tr>
<td>American Indian/Alaskan Native</td>
<td>1.5%</td>
<td>1.3%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Asian/Pacific Islander</td>
<td>3.7%</td>
<td>5.7%</td>
<td>5.0%</td>
</tr>
<tr>
<td>Latino/Hispanic</td>
<td>3.4%</td>
<td>2.3%</td>
<td>2.1%</td>
</tr>
<tr>
<td>Middle Eastern</td>
<td>0.2%</td>
<td>0.3%</td>
<td>0.4%</td>
</tr>
<tr>
<td>Caucasian/White</td>
<td>90.7%</td>
<td>85.6%</td>
<td>88.9%</td>
</tr>
<tr>
<td>Other</td>
<td>1.7%</td>
<td>2.0%</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

## Current Residence

<table>
<thead>
<tr>
<th>Current Residence</th>
<th>Veterans</th>
<th>All Students–Adjusted Data</th>
<th>All Students–Unadjusted Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residence Hall or Fraternity/Sorority</td>
<td>3.6%</td>
<td>5.5%</td>
<td>15.9%</td>
</tr>
<tr>
<td>Other</td>
<td>96.4%</td>
<td>94.5%</td>
<td>84.1%</td>
</tr>
</tbody>
</table>
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.
References


References


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