



MICHIGAN STATE UNIVERSITY STUDENT HEALTH ASSESSMENT:

Results of the 2018 NCHA Survey of MSU Students

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MSU Student Health Assessment: 2018 NCHA

INTRODUCTION AND METHODS

In the Spring of 2018, Michigan State University participated again in the National College Health Assessment Survey (NCHA) through Olin Student Health Center's membership in the American College Health Association (ACHA). The survey is designed to gauge the health and health behaviors of college students, especially as they impact their academic performance. The purpose is to enable university administrators to plan efforts that might help students thrive, to evaluate efforts to-date, and to inform students.

The NCHA was first conducted at MSU in 2000 and has been repeated every two years since then. The survey was administered on the ACHA website as a web survey designed by ACHA staff and the CORE Institute. At MSU, the online survey was managed by the Office for Survey Research within the Institute for Public Policy and Social Research.

On February 12, 2018, a stratified random sample of 5,500 MSU undergraduates (3,100 males and 2,400 females) and 1,500 MSU graduate/professional students was sent a pre-notification email informing them that they would be receiving an e-mail invitation from ACHA to participate in the National College Health Assessment. On February 14, the same sample was sent an e-mail invitation from ACHA containing a web-link to the survey. The survey began February 14 and concluded March 16. Email reminders were sent to non-responders on February 18, February 22, and February 27. Additional global messages encouraging participation were sent on February 15, February 23, and March 1.

A total of 1,239 students responded, but several were excluded from analysis because of missing data, particularly on demographic items used for weighting. The final data file contained useable responses from 1,226 students. The overall response rate was 18%.

The same survey is administered annually on more than 100 other campuses across the nation. ACHA makes available the results of the surveys administered across the nation so individual colleges and universities can compare their results to the nationwide results. However, the NCHA is administered at different times during the academic year, following quite varied sampling methodologies, and at a broad mix of colleges and universities. The national data sets are not weighted to correct for disproportionate sampling and non-response. At MSU, the NCHA has always been administered to probability samples during the same four-week time period of the Spring Semester and has used the same weighting approach to match the enrollment profile at the time. Consequently, the nationwide results are in fact not suitable as a basis of comparison.

The questionnaire covered a diverse set of health-related topics including perceived health status, sexual behaviors and beliefs, alcohol-tobacco-drug behavior and beliefs, injury prevention, disease prevention and screening, victimization, exercise and rest, emotional and mental health, incidents of disease or injury, incidents of stressors, sources and credibility of health information, and background questions. The questionnaire administered in 2018 was nearly the same version of the questionnaire (NCHA II) as was administered in 2016, 2014, 2012 and 2010. This was a substantially modified version of the questionnaire administered from 2000 through 2008 (NCHA I). While many questions remained the same, some questions were added and some formerly used questions were dropped or modified.

The 2018 and 2016 version of NCHA (IIc) differed primarily by the inclusion of questions about e-cigarettes and an expanded battery regarding sex, gender identity and sexual orientation.

This summary will report the findings of the 2018 survey. Where relevant, we will compare results to the earlier surveys to note changes in health behaviors and beliefs of MSU students over time.

Because some segments of the student body were somewhat over-

Table 1. Profile of the Sample of Survey Respondents (n=1,226) Overall, by Student Status: 2018

Characteristic		% Overall	% Undergrads	% Grad/ Professional
Gender	Male	47.8%	48.6%	45.3%
	Female	52.2%	51.4%	54.7%
Age	18	9.7%	12.7%	0.0%
	19	14.8%	19.5%	0.0%
	20	17.7%	23.3%	0.0%
	21	19.5%	25.6%	0.3%
	22	10.4%	12.2%	4.8%
	23	4.8%	2.9%	10.5%
	24	3.6%	0.9%	12.2%
	25	2.8%	0.0%	11.6%
	26	3.9%	1.1%	12.6%
	27	2.7%	0.5%	9.5%
	28	1.8%	0.0%	7.5%
	29	1.1%	0.0%	4.8%
	30	1.2%	0.1%	4.8%
	31+	6.0%	1.1%	21.4%
Race	White (not Hispanic)	66.4%	68.1%	60.9%
	African American (not Hispanic)	6.2%	6.8%	4.4%
	Hispanic	4.2%	4.5%	3.1%
	American Indian/Alaskan	0.1%	0.0%	0.3%
	Asian/Pacific Islander	5.2%	5.5%	4.1%
	Not Reported/Other	3.8%	3.9%	3.7%
	International Student	14.2%	11.2%	23.5%
Year in School	First	15.0%	19.7%	0.0%
	Second	16.7%	22.0%	0.0%
	Third	19.9%	26.2%	0.0%
	Fourth	19.0%	25.0%	0.0%
	Fifth or more	5.4%	7.1%	0.0%
	Graduate Student/other	24.2%	0.0%	100.0%
Cumulative GPA	A	56.7%	51.2%	73.9%
	B	34.4%	39.3%	19.0%
	C	6.4%	8.3%	0.3%
	D/F	0.5%	0.6%	0.0%
	Not Applicable	2.0%	0.5%	6.8%
Full-time Student		93.3%	95.2%	87.4%

Table 1. (Continued)

Characteristic	% Overall	% Undergrads	% Grad/ Professional
Residence			
Residence Hall	31.0%	40.3%	1.7%
Fraternity/Sorority	1.9%	2.5%	0.0%
Other campus housing	2.9%	3.2%	1.7%
With Parents/Guardian	3.3%	2.7%	5.1%
Other off campus	57.5%	50.2%	80.6%
Other	3.4%	1.1%	10.9%
Member of Fraternity/Sorority	12.0%	14.1%	5.1%
Have Health Insurance			
University Plan	18.2%	5.7%	57.1%
Parents' Plan	66.1%	81.1%	19.0%
Another Plan	12.8%	9.8%	22.4%
Have No Health Insurance	2.0%	2.2%	1.4%
Not Sure	0.9%	1.2%	0.0%
Employed weekly	61.0%	57.6%	71.5%
Volunteer weekly	32.6%	31.1%	37.4%
Sexual Orientation			
Heterosexual	90.0%	90.4%	88.8%
Gay/Lesbian	3.5%	3.3%	4.1%
Bisexual	5.1%	5.2%	4.7%
Unsure	1.4%	1.1%	2.4%
Varsity Athlete	2.1%	2.2%	1.7%
Club Sport Athlete	9.6%	11.3%	4.4%
Disabilities: None	78.8%	78.4%	80.0%
ADHD	8.4%	9.5%	5.1%
Chronic illness (e.g., cancer, diabetes, etc.)	5.6%	5.0%	7.5%
Deaf/hard of hearing	1.2%	1.2%	1.0%
Learning disability	1.9%	2.2%	1.0%
Mobility/dexterity disability	0.7%	0.7%	0.7%
Partially sighted/blind	1.2%	1.1%	1.7%
Psychiatric condition	7.9%	7.9%	7.8%
Speech or language disorder	0.4%	0.4%	0.3%
Other disability	1.5%	1.9%	0.3%

or under-represented among respondents, the data set has been weighted based on gender, race/ethnicity, and academic class status so that the final weighted sample more nearly matches the proportions of these groups in the MSU student body as a whole.

Table 1 provides a demographic profile of the sample after applying weighting adjustments to make the weighted sample more proportionately representative of the MSU student body during Spring Semester 2018. The table shows the profile of the student respondents overall and among undergraduates and among graduate/professional students. The table indicates, for example, that 21.2% of MSU students report having at least one type of disability and that the most prevalent disabilities are ADHD (8.4%), a psychiatric condition (7.9%), a chronic illness (5.6%), hearing impairment (1.2%), and a learning disability (1.9%).

The analyses summarized here are based on the 1,226 weighted cases. A weighted sample of this size has an overall margin of sampling error of $\pm 2.8\%$ or less ($\pm 3.4\%$ among undergraduates, $\pm 5.0\%$ among graduate/professional students).

RESULTS: Perceived Health Status

Table 2 shows the percentages of respondents who rated their health as excellent, very good, good, fair or poor. The table indicates that:

- Overall, 54.6% of respondents rated their health as excellent (14.4%) or very good (40.1%). This was virtually identical to the 54.6% found in 2016 which was down from the 61.7% found in 2014, the 59.9% in 2012 and the 62.5% in 2010.
- Males were somewhat more likely than females to rate their health as excellent or very good.
- International students were more likely to rate their health as excellent or very good (60.3%) than were domestic White students (56.0%) who were much more likely to do so than Other domestic students (45.3%).
- There were no statistically significant differences across age groups, or between on campus and off campus residence.

Table 2. Percentage Distribution of Perceived Health Status of Student Respondents: 2018					
How would you describe your general health?					
	Excellent	Very Good	Good	Fair	Poor
Overall	14.4%	40.1%	31.5%	12.2%	1.7%
Student Status					
Undergrad Student	14.8%	39.4%	31.3%	12.2%	2.2%
Grad./Prof. Student	13.2%	42.4%	31.5%	12.5%	0.3%
Gender					
Males	21.2%	41.3%	27.4%	8.8%	1.4% *
Females	8.2%	39.1%	35.2%	15.5%	2.1%
Race					
White	14.3%	41.7%	31.9%	10.4%	1.6% *
Other	9.7%	35.6%	33.9%	17.4%	3.4%
International	21.3%	39.1%	25.9%	13.2%	0.6%
Age					
18-19	10.4%	42.1%	31.6%	13.8%	2.0%
20-21	15.7%	40.0%	31.1%	11.6%	1.6%
22-23	15.8%	40.2%	33.7%	8.2%	2.2%
24 or older	15.8%	37.7%	30.6%	14.4%	1.4%
Residence					
On campus	14.9%	42.2%	30.2%	11.0%	1.7%
Off campus	14.2%	39.2%	32.1%	12.8%	1.7%
GPA					
A	17.4%	41.6%	30.2%	10.0%	0.7% *
B	11.5%	40.3%	33.3%	12.5%	2.4%
C or less	6.2%	29.6%	30.9%	25.9%	7.4%
* $p(\chi^2) < .05$					

- Students performing better academically were more likely to rate their health as excellent or very good.

Figure 1 below indicates that, although very stable for the ten-year period from 2004 to 2014, the overall percentage of MSU students rating their health as excellent or very good has declined while the percentage rating their health as only fair or poor has increased slightly from 2000 to 2018.

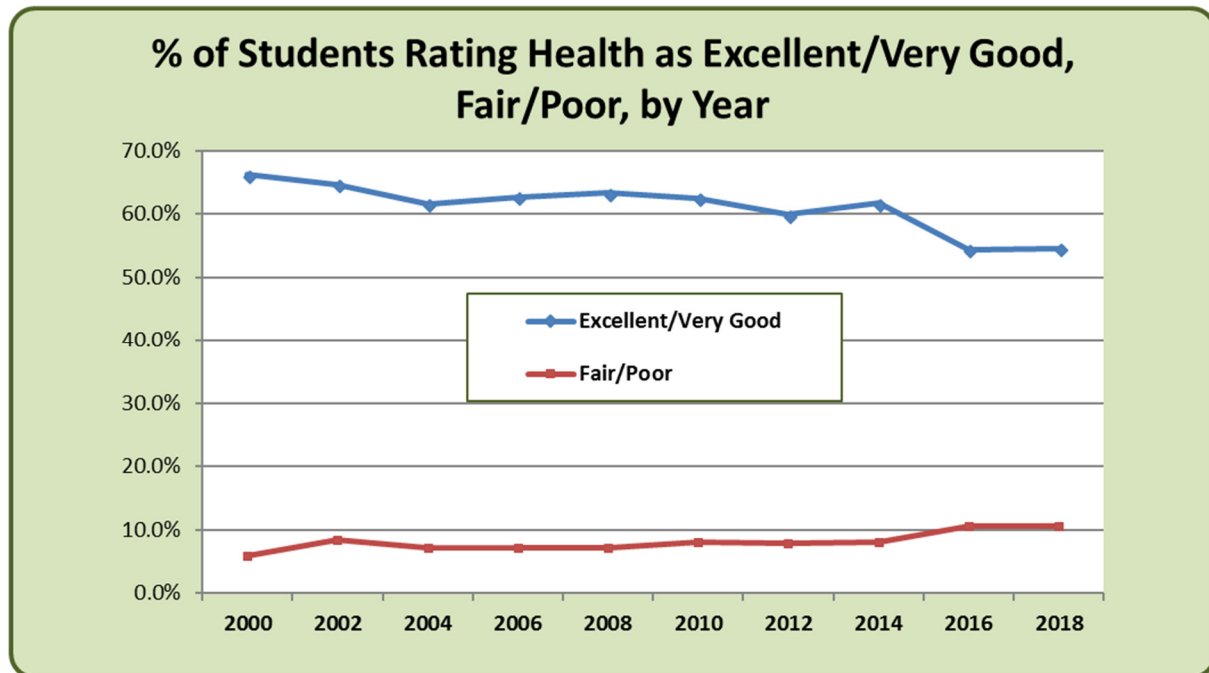


Figure 1. Percentage of Respondents Rating Own Health Excellent/Very Good, Fair/Poor 2000-2018

RESULTS: Weight Status, Exercise and Rest

Respondents were asked to indicate their height, weight, how many days in the past week they exercised either vigorously for 20 minutes or moderately for 30 minutes, how many days they did muscle strengthening exercises, how many days in the past week they got enough sleep, and how many servings of fruits and vegetables they usually eat per day.

The respondents' heights and weights were converted into Body Mass Index (BMI) scores (kilograms/meters²) and then categorized into weight statuses with BMI scores of 25.0 - 29.9 coded as overweight and 30.0 or greater coded as obese. The results for these questions are presented in Table 3 along with the comparisons on each between males and females, domestic White and Other racial/ethnic group and international respondents, those living on campus and those living off campus, and among GPA categories.

The table indicates that:

- 37.7% of the respondents were overweight (24.8%) or obese (12.9%) based on BMI – somewhat greater than the 33.6% found in 2016, the 30.8% found in 2014, 33.4% in 2012 and the 32.5% reported in 2010.
 - Males were more likely to be overweight or obese than females (44.1% vs. 31.8%).
 - International students were least likely to be overweight or obese while domestic Other students were most likely.
 - Undergraduates and respondents with higher GPAs were less likely to be overweight or obese than were their counterparts.
- 66.5% of respondents indicated that they exercised three or more days during the previous week – up from 60.7% in 2016 but similar to the 65.3% found in 2014, 65.1% found in 2012, and the 64.9% found in 2010
 - Males and females were about equally likely to report exercising three or more days during the previous week.
 - Domestic White respondents were more likely (69.0%) than Other domestic students or international students (62.2% and 60.7% respectively) to report exercising three or more days per week.
 - Graduate/professional students were less likely than undergraduates to report three or more days of vigorous/moderate exercise in the previous week.

- 43.1% of the respondents did muscle strengthening or toning exercises two or more days in the previous week – up slightly from the 39.1% in 2016, 38.2% in 2014, 37.8% in 2012, and 37.6% in 2010.

Table 3. Percentage Distribution of Weight Status, Exercise, and Fruit and Vegetable Intake Among Respondents, by Background Characteristics: 2018											
Health Problem	%	GENDER		RACE			STUDENT STATUS		CUMULATIVE GPA		
		Male	Female	White	Other	Internatl	Undergrad	Grad/Prof.	A	B	C/D/F
Weight Status											
Acceptable/Not Overweight	62.3%	55.9%	68.2% *	62.7%	57.4%	67.3% *	64.5%	55.6% *	64.3%	62.4%	47.0% *
Overweight	24.8%	30.5%	19.5%	26.1%	18.1%	27.5%	22.8%	31.1%	26.1%	22.1%	26.5%
Obese	12.9%	13.6%	12.3%	11.2%	24.5%	5.3%	12.7%	13.3%	9.6%	15.6%	26.5%
Participate in vigorous exercise for 20 minutes or moderate exercise for 30 minutes...											
0 days per week	15.0%	15.2%	14.9%	12.7%	20.2%	19.7% *	13.6%	19.6% *	14.4%	14.5%	20.2%
1-2 days per week	18.4%	16.0%	20.7%	18.3%	17.6%	19.7%	17.4%	21.6%	18.0%	18.6%	21.4%
3 or more days per week	66.5%	68.8%	64.4%	69.0%	62.2%	60.7%	69.0%	58.8%	67.5%	66.9%	58.3%
Do exercises to strengthen/tone muscles...											
0 days per week	45.4%	41.3%	49.3% *	42.7%	49.1%	52.9%	44.6%	47.3%	41.9%	48.2%	55.4% *
1 day per week	11.5%	10.4%	12.4%	12.3%	8.5%	11.6%	10.6%	14.4%	12.3%	9.8%	13.3%
2 or more days per week**	43.1%	48.3%	38.3%	45.0%	42.3%	35.5%	44.7%	38.4%	45.7%	42.0%	31.3%
Guideline for Physical Activity Met or Not [30 min. moderate activity 5+ days/week OR 20 min. vigorous activity 3+ days/week OR equivalent combination (2 days mod. = 1 day vigorous)]											
Not Met	47.7%	43.8%	51.3% *	45.0%	49.6%	57.8% *	44.6%	57.6% *	46.1%	47.1%	58.8%
Met	52.3%	56.2%	48.7%	55.0%	50.4%	42.2%	55.4%	42.4%	53.9%	52.9%	41.2%
Get enough sleep so feel rested when wake up in the morning...											
< 4 days per week	56.7%	51.2%	61.6% *	57.8%	64.8%	39.8% *	59.0%	49.3%	53.0%	61.0%	65.5% *
4-5 days per week	30.9%	34.2%	27.9%	30.5%	22.0%	45.6%	29.3%	35.7%	33.0%	28.1%	28.6%
6-7 days per week	12.4%	14.6%	10.6%	11.7%	13.1%	14.6%	11.6%	15.0%	14.0%	11.0%	6.0%
Number of servings of fruits and vegetables eat per day											
None	6.2%	7.5%	5.2%	5.0%	10.9%	5.2% *	7.4%	2.7% *	4.6%	6.7%	17.6% *
1-2	57.4%	56.8%	57.8%	55.4%	61.5%	61.8%	58.4%	54.4%	54.9%	60.3%	65.9%
3-4	30.5%	29.9%	31.1%	32.7%	23.4%	29.5%	29.1%	34.5%	34.0%	27.8%	15.3%
5 or more	5.9%	5.8%	5.9%	6.9%	4.2%	3.5%	5.1%	8.4%	6.5%	5.2%	1.2%

* $p(\chi^2) < .05$

** Note: This was reported for 0 days, 1-2 days, 3 or more days in the tables for previous years' surveys. The category groupings were revised this year to be consistent with CDC guidelines of muscle strengthening exercises 2 or more days per week.

- Males were more likely to report engaging more often per week in these types of exercises than females.
 - Domestic students were more likely to participate more often in muscle strengthening exercises than international students.
- Slightly more than half (52.3%) of all students met the guideline for aerobic physical activity (a combination of vigorous/moderate exercising) – up from 45.6% in 2016 but similar to the 51.4% found in 20014.
 - Domestic students were more likely than their counterparts to meet the physical activity guideline, as were males and undergraduates.

- More than half the respondents (56.7%) reported getting sufficient sleep fewer than four days out of the previous seven, up slightly from the 52.7% in 2016 and 52.3% in 2014, but similar to the 54.2% in 2012 and the 55.8% in 2010.
 - As in the four prior years' surveys, females were less likely than males to report getting adequate sleep six or seven days in the previous week.
- 6.2% of all respondents reported eating five or more servings of fruits and vegetables per day, the minimum recommended for good health by nutritionists – similar to the 5.7% in 2016, the 6.4% reported in 2014 and the 5.9% found in both 2012 and 2010. 63.6% reported eating two or fewer servings per day (vs. 66.5% in 2016, 63.5% in 2014, 65.0% in 2012, and 65.5% in 2010).
 - There were no significant differences between males and females – about 94% of both fell short of the five per day recommendation
 - Domestic White respondents were somewhat more likely to report eating more servings of fruits and vegetables per day than were their domestic Other or international counterparts.
 - Graduate/professional students were more likely than undergraduates to report eating greater numbers of servings of fruits and vegetables daily.
 - Those with higher GPAs were more likely to report eating more servings of fruits and vegetables daily than were their counterparts with lower GPAs.

Figure 2 shows the trends for these measures from 2000 to 2018.

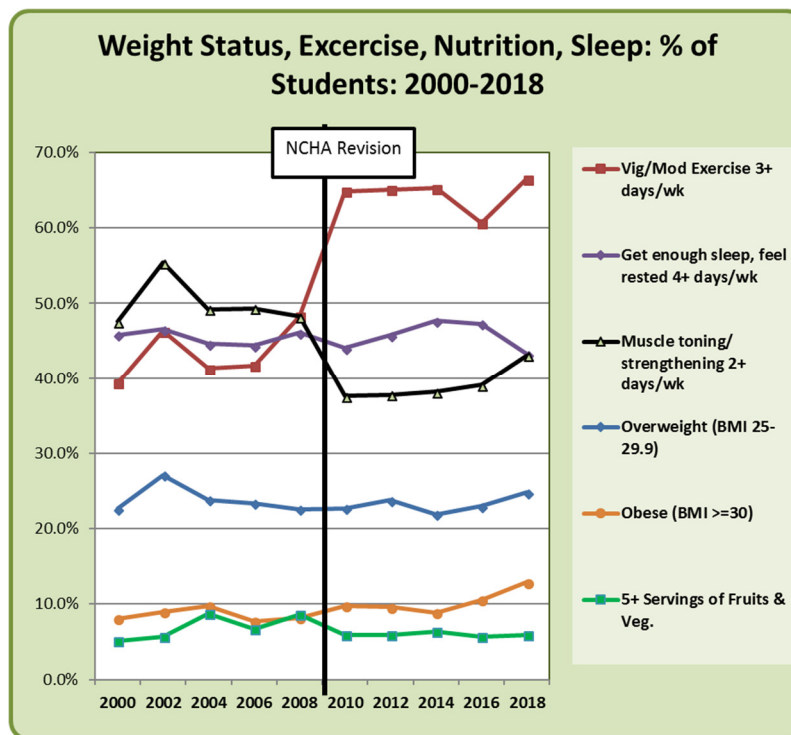


Figure 2. Weight, Exercise, Sleep and Nutrition Status: 2000 to 2018

The substantial increase in the percentage of students who reported exercising at least moderately for 3 or more days a week from 2008 to 2010 is undoubtedly an artifact of a change in the questionnaire in 2010. Two separate questions on moderate activities and vigorous activities were combined to produce a single exercise measure analogous to the one question used from 2000 to 2008, but the combined response appears to result in a greater measurement. The results were very similar between 2010 and 2018. The change in measurement of exercise apparently came at the expense of weight training which showed a substantial decline from 2008 through 2010 but was also relatively unchanged between 2010 and 2018.

The question about muscle strengthening/toning in 2010 was also quite different than the question in the earlier questionnaire. Starting in 2010, the question specified a number of different exercises and a number of repetitions for each, whereas the earlier question left the number of exercises and repetitions unspecified. Therefore, we suspect most of the substantial drop in the percentage doing this type of exercise two or more days a week reflects the effect of the change in question wording.

There was no change in the question wording regarding days of adequate sleep. Figure 2 shows only small fluctuations in the percentage of students who reported getting adequate, restful sleep most nights of the week from 2000 through 2016 but a relatively greater decline in 2018.




Figure 2 also indicates that the percentage of the students who were obese or overweight and the percentage who reported consuming five or more servings of fruits and vegetables have been relatively stable over the past eighteen years, although the percentages that were obese or overweight both increased in 2018.

The questionnaire included several questions regarding how respondents perceive their own weight status, what they were trying to do about their weight, and if they had used any of several weight loss strategies in the previous 30 days. Table 4 shows the percentages of respondents giving each of the possible answers and then compares the percentage distributions of responses among respondents categorized by their BMI-based weight status.

The table indicates that:

- 90.6% of those in the “Not Overweight” category described themselves as either about the right weight or underweight – slightly greater than in 2016 (85.6%) but similar to 2014 and 2012 -- while 9.4% of them perceived themselves to be at least somewhat overweight.
- More than a third (37.3%) of those classified as overweight according to BMI indicated their weight was about right – virtually identical to the 2016 results.
- While 38.2% of those classified as obese described themselves as ‘very overweight’, nearly six out of ten characterized themselves as ‘slightly overweight’.
- Overall, 48.4% of respondents said they were trying to lose weight, but this percentage increases to 65.9% among those classified as overweight, and to 87.0% among those classified as obese -- both nearly identical to the 2016 results. Also, as in 2016, a third (33.1%) of those who were not overweight or obese indicated that they were also trying to lose weight.

Table 4. Percentage Distribution of Perceived Weight Status, Diet and Exercise Behavior, by BMI-Based Weight Status: 2018				
ITEM	% Overall	BMI-Based Weight Status		
		Not Overweight	Overweight	Obese
How describe own weight				
Very underweight	0.3%	0.3%	0.3%	0.0% *
Slightly underweight	9.4%	14.9%	0.0%	0.6%
About the right weight	56.9%	75.4%	37.3%	4.5%
Slightly overweight	28.3%	9.4%	61.7%	56.7%
Very overweight	5.2%	0.0%	0.7%	38.2%
Currently trying to . . .				
Doing nothing about weight	14.4%	17.6%	11.7%	3.8% *
Stay the same weight	25.4%	32.3%	19.4%	3.2%
Lose weight	48.4%	33.1%	65.9%	87.9%
Gain weight	11.8%	17.0%	3.0%	5.1%
Within last 30 days, did . . .				
Exercise to lose weight	53.0%	43.9%	67.9%	68.6% *
Diet to lose weight	41.2%	29.4%	58.1%	64.7% *
Vomit or take laxatives to lose weight	1.8%	2.0%	1.4%	1.9%
Take diet pills to lose weight	1.9%	1.1%	3.4%	2.6% *
None of the above	42.1%	52.5%	26.1%	22.4% *
* $p(\chi^2) < .05$				


- Among those who were classified as overweight, two-thirds (67.9%) said they had been trying to lose weight in the previous month by exercising, while a little more than half (58.1%) said they had been trying to lose weight by dieting. Among those classified as obese, nearly seven out of ten (68.6%) said they had been trying to lose weight by dieting and a similar percentage were trying to lose weight by exercising (64.7%).
- Among those classified as obese, 22.4% said they had not been trying to lose weight in any of the four methods listed.

The questionnaire included several additional questions regarding sleep. Respondents were asked how much of a problem they had in the previous seven days with sleepiness during the daytime. One in eight students (9.7%) said it was 'not a problem at all' – similar to the results in 2014 and 2012 -- while almost half (48.1%) said it was 'a little problem.' A quarter (25.2%) said it was 'more than a little problem,' 11.9% said it was 'a big problem' and 5.1% said it was 'a very big problem.' As in earlier years' surveys, females, domestic students, and those with lower GPAs continue to be somewhat more likely to report sleep problems than their respective counterparts.

Respondents were asked how many days of the previous seven they awakened too early in the morning and could not get back to sleep, felt tired or dragged out or sleepy during the day, or went to bed because they just could not stay awake any longer, or had an extremely hard time falling asleep. On average, students reported:

- 1.01 days in the previous seven when they awakened too early and could not get back to sleep – 56.1% (compared to 56.2% in 2016, 54.8% in 2014 and 58.3% in 2012) reported no such days, 16.2% reported only one day, but 7.5% reported four or more days – similar to the 7.0% found in 2016, 8.0% found in 2014, 6.3% in 2012 and 8.1% in 2010.
- 3.2 days in which they felt tired, dragged out, or sleepy during the day – slightly greater than in the three previous surveys. One in twelve (8.6%) reported no such days – compared to 11.4% in 2016 and 9.3% in 2014. One in eight (12.5%) reported one such day, but 41.3% reported four or more such days in the previous week – up from the 34.6% found in 2016, 35.4% found in 2014 and 39.8% reported in 2012.
- 1.8 days in which they went to bed because they just could not stay awake any longer – the same as in most previous surveys. More than a third (37.5%) reported there were no such days, 19.1% reported there was only one, 13.3% reported there were two days, and 18.6% reported there were three or more such days – down from 25.2% in 2016.
- 1.5 days in the previous seven when they reported having an extremely hard time falling asleep – very similar to 2016, 2014, 2012 and 2010. Nearly half (42.8%) reported there were no such days, 19.5% reported one day, 11.9% reported two days, and the remaining 15.9% reported there had been three or more such days in the previous week – down from 22.4% in 2016.

Examining the occurrence of these sleep problems among various types of students, the analysis indicated that, on average:

- Females reported more days than males in which they awakened too early, felt tired, dragged out or sleepy during the day, and more days that they had to go to bed because they just could not stay awake – roughly the same differences found in 2016, 2014 and 2012.
 - Undergraduates and graduate/professional students differed significantly regarding the number of days in which they felt tired, dragged out or sleepy and the number of days they had extreme difficulty falling asleep.
 - Compared to domestic students, international students reported fewer days in which they awakened too early and could not get back to sleep, felt tired, dragged out or sleepy during the day and had extreme difficulty falling asleep.
- 

- As in 2016 and 2014, those with lower GPAs reported more days in which they awakened too early, of feeling tired during the day, having to go to bed because they could not stay awake, and having extreme difficulty falling asleep problems than those with higher GPAs.

RESULTS: Injury Prevention

Respondents were asked to indicate how often within the last twelve months they wore seatbelts when riding in a car or wore a helmet when bicycling, motorcycling, or inline skating.¹ Table 5 shows the percentages of respondents who indicated having taken these precautions to prevent injury and how often they did so.

Table 5 indicates that:

- Nearly all students (99.0%) indicated having ridden in a car in the past year. Of those who did, only 2.4% of these said they wore a seatbelt less than most of the time –very similar to the 2.0% found in 2016, 3.0% in 2014 and 2.8% in 2012; 84.0% said they always wear a seatbelt when riding in a car – about the same as the 85% reported in 2016 and slightly greater than the 82.0% reported in 2014, 80.2% in 2012 and 82.9% in 2010.
- Two-thirds of respondents (66.7%) -- about the same as the in the three previous surveys -- indicated they had ridden a bicycle during the past year. Of these, 57.6% indicated that they never

Table 5. Percentage of Respondents Who Wore Protective Equipment to Prevent Injury During Last School Year (Of Those Engaging in the Activity): 2016					
Within last school year, how often did you . . .	Never	Rarely	Sometimes	Most of the Time	Always
Wear a seatbelt when rode in a car	0.6%	0.4%	1.1%	12.9%	85.0%
Wear a helmet when rode a bicycle	62.6%	12.8%	6.7%	5.8%	12.2%
Wear a helmet when rode a motorcycle	11.7%	3.7%	6.2%	12.3%	66.0%
Wear a helmet when inline skating	57.7%	12.0%	4.2%	7.0%	19.0%
* $p(\chi^2) < .05$					

¹ In the questionnaire administered prior to 2010, these questions referred to 'within the last school year' rather than the whole past year as the questions did beginning in 2010 so some difference in responses to those collected prior to 2010 would be reasonable to expect.

wear a helmet – down from the 62.6% found in 2016, 65.8% of bicycle riders in 2014, 67.3% in both 2012 and 2010.

- One in six (15.2%, about the same as in 2016) reported riding a motorcycle in the past year. Of those who did, barely half (51.4%) said they always wear a helmet, while 25.9% reported never wearing a helmet. The percentage always wearing a helmet is down from 66.0% in 2016, 74.0% in 2014 and 76.9% in 2012. The percentage never wearing a helmet is more than double the 11.7% found in 2016, 12.9% in 2014, and 9.8% reported in 2012. After the 2012 survey, Michigan signed a bill into law making it legal to ride without wearing a helmet. The change in the law has resulted in the decreasing use of helmets among MSU students who ride motorcycles.
- 16.3% of all respondents indicated they had been inline skating in the past year. Of these, 63.8% reported that they never wore a helmet – up from the 57.7% found in 2016 but similar to the findings in 2014 (64.3%) and 2012 (65.4%). In 2018, 16.6% of inline skaters said they always wear a helmet which is down slightly from 19.0% in 2016, and 21.9% in 2014, but still substantially greater than the 8.1% that said that they always wear a helmet when inline skating in 2012, and 10.8% in 2010.

Figure 3 shows the changes in the students' use of the protective equipment for these activities from 2000 to 2018. The figure indicates that there has been a general, gradual increase in the percentage of students who:

- Always wear a seatbelt when riding in a car,
- Wear a helmet most or all of the time when riding a motorcycle until the law changed, then sharply declined,
- Wear a helmet most or all of the time when riding a bicycle and when inline skating.

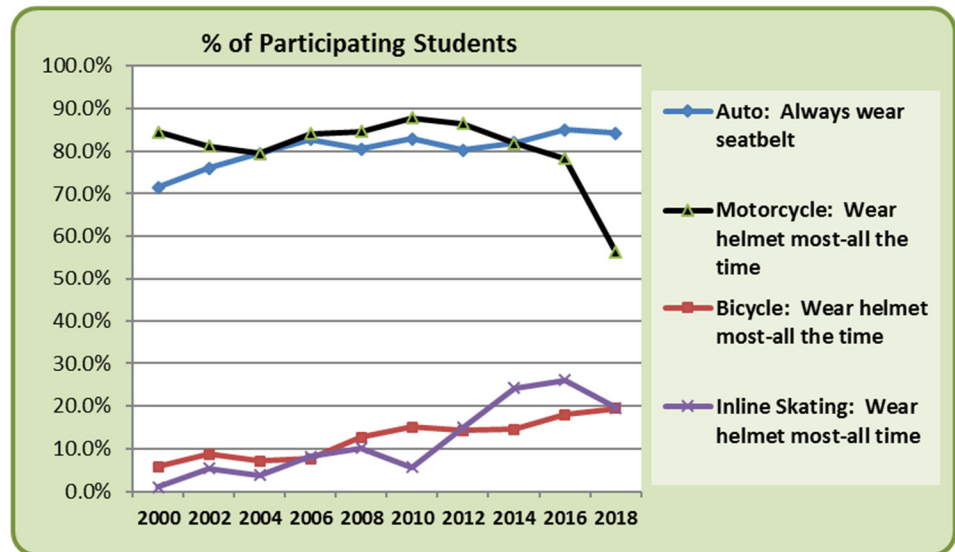


Figure 3. Student Use of Protective Equipment to Prevent Injuries: 2000 to 2018

RESULTS: Disease Prevention and Screening

The questionnaire asked respondents to indicate whether or not they had been vaccinated against various diseases and whether or not they had recently had preventive health screening exams such as dental exams and cleaning, breast exams (females only), gynecological exams (females only), testicular exams (males only), blood pressure checks, cholesterol checks, or used sunscreens. Figure 4 shows the differences in the results for 2018 compared to 2016, 2014, 2012 and 2010.

Figure 4 indicates that:

- The percentages of students vaccinated against the Human Papilloma Virus (HPV), against influenza, against measles, mumps and rubella, against meningococcal disease and against varicella have all gradually increased from 2010 to 2018 – especially the vaccination rates for HPV and varicella.

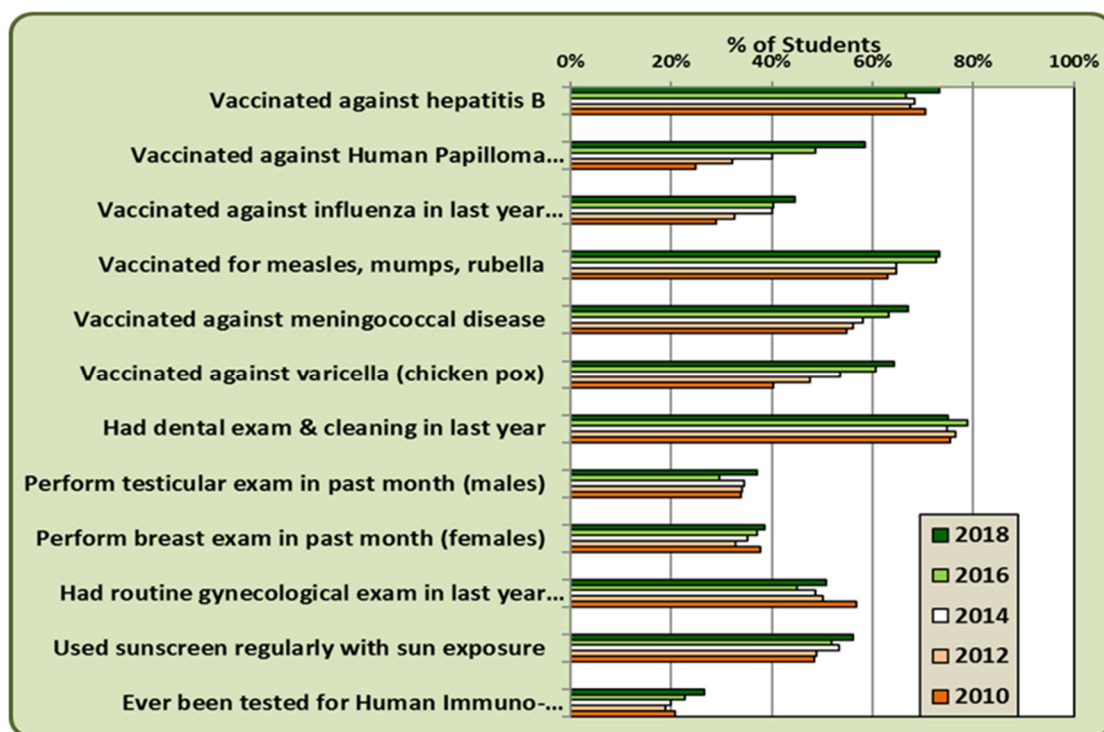


Figure 4. Percentage of Respondents Who Reported Having Done Various Disease Prevention, Early Detection Procedures: 2018 vs. 2016 vs. 2014 vs. 2012 vs. 2010

- The percentages of students vaccinated against hepatitis B rebounded in 2018 to 73.3% after having declined from 2010 to 2016 (i.e., 66.6% in 2016 vs. 70.5% in 2010).

- The percentages having a dental exam and cleaning in the past year, performing testicular exams in the past month, performing a breast exam in the past month, and having been tested for HIV have all fluctuated some from survey to survey but, overall, have changed little.
- The percentages of female students who had a routine gynecological exam in the last year had steadily declined from 2010 to 2016, but increased to 50.8% in 2018, while the percentages that used sunscreen regularly with sun exposure continued to increase gradually.

Table 6 shows the percentage of all respondents who said that they had done each of these and the percentage who indicated not knowing if they had or not. The table also compares the percentages of respondents who said they had done each of these across various demographic groups of respondents. The table indicates that:

- Females were more likely than males to report having been vaccinated against hepatitis B, HPV, meningitis and measles/mumps/rubella, more likely to report using sunscreen regularly, and also more likely to report having ever been tested for HIV.

International students were less likely to report having received any of the vaccinations or performing the screening tests than domestic students, except for being tested for HIV. White domestic respondents were more likely than Other domestic respondents to report having been vaccinated against meningococcal disease, and measles/mumps/rubella, more likely to report having had a dental exam in the last year, to perform monthly breast exams, to have had a gynecological exam in the last year, and to use sunscreen.

- Graduate students were more likely than undergraduates to report having been vaccinated against influenza and measles/mumps/rubella, more likely to have been tested for HIV, and more likely to have had a routine gynecological exam, but they were less likely than undergraduates to have been vaccinated against HPV, or varicella, and less likely to have had a dental exam and cleaning in the past year.
- Respondents with higher GPAs were more likely than their lower GPA counterparts to report using sunscreen regularly.

Prevention/Early Detection Step	% Yes **	% Don't Know	% Who Answered Yes									
			GENDER		RACE			STUDENT STATUS		CUMULATIVE GPA		
			Male	Female	White	Other	Internatl	Undergrad	Grad/Prof.	A	B	C/D/F
Vaccinated against hepatitis B	73.3%	16.1%	69.7%	76.5% *	76.0%	76.7%	55.6% *	72.7%	75.3%	72.9%	73.3%	72.3%
Vaccinated against Human Papilloma Virus/HPV	58.6%	15.2%	52.4%	64.4% *	62.2%	62.6%	36.6% *	63.1%	44.9% *	56.1%	63.4%	59.0%
Vaccinated against influenza in last year (short or nasal mist)	44.5%	6.7%	43.5%	45.4%	43.6%	52.1%	38.4% *	41.6%	53.6% *	42.5%	45.6%	48.2%
Vaccinated for measles, mumps, rubella	73.4%	15.4%	69.4%	77.1% *	79.0%	72.0%	48.8% *	71.0%	81.2% *	73.6%	73.6%	67.9%
Vaccinated against meningococcal disease	67.1%	18.5%	63.3%	70.6% *	73.4%	65.5%	39.8% *	68.5%	62.9%	67.2%	67.9%	63.1%
Vaccinated against varicella (chicken pox)	64.4%	14.3%	62.0%	66.6%	69.9%	64.7%	38.0% *	67.6%	54.3% *	62.0%	67.8%	65.5%
Had dental exam & cleaning in last year	75.0%	1.7%	73.9%	76.1%	82.8%	67.9%	48.3% *	78.1%	65.5% *	74.7%	78.6%	63.1% *
Perform testicular exam in past month (males)	37.1%	4.5%	37.2%	--	41.8%	41.4%	15.7% *	37.2%	36.8%	34.3%	39.5%	45.7%
Perform breast exam in past month (females)	38.7%	1.4%	--	38.7%	42.2%	36.7%	20.3% *	37.7%	41.9%	35.9%	44.5%	32.0%
Had routine gynecological exam in last year (fem.)	50.8%	0.8%	--	50.8%	55.9%	44.9%	30.4% *	46.0%	64.8% *	49.0%	52.1%	54.0%
Used sunscreen regularly with sun exposure	56.2%	1.5%	46.4%	65.1% *	66.3%	34.2%	39.9% *	53.8%	63.2% *	59.7%	53.7%	41.7% *
Ever been tested for Human Immuno-deficiency Virus/HIV	26.7%	5.1%	19.7%	33.1% *	25.5%	30.1%	27.3%	22.8%	38.9% *	26.8%	24.8%	32.1%
* $p(\chi^2) < .05$												

** The percentage who said they had not done each of these is not reported in the table but can easily be calculated by summing the percentage who said they had done it and the percentage who said they did not know if they had done it and then subtracting this sum from 100%. The result is the percentage of respondents who said they had not done this.

RESULTS: Alcohol, Tobacco, and Other Drugs

FREQUENCY OF USE. The questionnaire included a series of questions on the use of tobacco, alcohol and other drugs. Respondents were asked to report the number of days they had used each of eighteen different types of substances over the previous 30 days. Table 7 shows the percentage distribution of responses for each of these eighteen types of substances. The table indicates that:

- Eight out of ten (79.3%) of the respondents reported never having smoked cigarettes at all -- up from 75.9% in 2016, 68.3% in 2014, 64.6% in 2012 and 61.8% in 2010 -- and another 13.0% reported not having smoked in the previous 30 days; only 2.4% of respondents claimed to have smoked cigarettes 6 or more days out of the previous 30 -- less than half the 5.2% found in 2016 and 2014 and down from 8.1% in 2012).
- One in fifty (1.8%) respondents claimed to have smoked tobacco from a hookah (i.e., water pipe) in the past month -- down from 5.1% in 2016,

Table 7. Percentage of Respondents Who Used Various Kinds of Drugs, Alcohol or Tobacco in the Past 30 Days: 2018					
In past 30 days, on how many days did you use:	Never	Not in Past Month	1-2 Days	3-5 Days	6 or More Days
Cigarettes	79.3%	13.0%	4.2%	1.0%	2.4%
Tobacco from a Hookah	81.9%	16.2%	1.0%	0.5%	0.3%
e-Cigarettes	77.5%	9.2%	4.6%	2.2%	6.5%
Cigars	81.2%	15.9%	1.8%	0.4%	0.7%
Smokeless tobacco	91.4%	5.7%	0.7%	0.9%	1.3%
Alcohol (beer, wine, liquor)	16.9%	12.5%	19.0%	17.8%	33.8%
Marijuana	59.7%	22.1%	7.7%	3.1%	7.4%
Cocaine	93.7%	5.1%	0.6%	0.3%	0.3%
Methamphetamines	98.2%	1.2%	0.3%	0.1%	0.2%
Other amphetamines	94.6%	2.7%	0.8%	0.3%	1.6%
Sedatives	97.4%	1.4%	0.3%	0.5%	0.4%
Hallucinogens	93.9%	5.1%	0.9%	0.0%	0.1%
Steroids	99.0%	0.6%	0.0%	0.4%	0.0%
Opiates	99.0%	0.7%	0.2%	0.0%	0.1%
Inhalants	97.9%	1.3%	0.3%	0.3%	0.1%
MDMA	94.8%	4.1%	0.6%	0.4%	0.1%
Other club drugs	98.4%	0.9%	0.6%	0.2%	0.0%
Other illegal drugs	97.8%	1.8%	0.1%	0.2%	0.1%

10.6% in 2014 and reversing the increasing trend from 7.4% in 2010, 9.7% in 2012, and 10.6% in 2014.

- More than eight out of ten respondents (81.2%) said they had never smoked cigars – up from 76.7% in 2016, 68.9% in 2014 and 64.2% in 2012 – and 91.4% said they have never used smokeless tobacco – up from 89.3% in 2016, 83.9% in 2014 and 82.7% in 2012. Only 2.9% of respondents claimed to have used smokeless tobacco in the previous 30 days – virtually the same as in 2016, which was down from 5.9% in 2014 -- while 2.9% claimed to have smoked cigars at least once in this time period – similar to the 4.2% in 2016 and down from 6.5% in 2014 and 8.3% in 2012.
- A question about smoking e-cigarettes had been added to the 2016 NCHA. In 2018, 77.5% of respondents said they had never smoked an e-cigarette – down from 82.4% in 2016, while the percentage that reported having smoked at least one during the previous month more than doubled in 2018 compared to 2016 (13.3% vs. 6.1%) and half of these respondents 6.5% (compared to 3.0% in 2016) reported smoking e-cigarettes six or more days in the past month.
- By contrast, 16.9% claimed never to have drunk alcohol – similar to the 17.8% in 2016 and the 18.7% in 2014, which were up slightly from 14.7% in 2012 -- and another 12.5% claimed not to have drunk alcohol in the previous 30 days – also similar to the 11.0% in 2016 and 9.9% in 2014; however, a third (33.8%) claimed to have drunk alcohol on six or more of the previous 30 days – virtually the same as in 2016, continuing the decline from 38.1% in 2012 and 39.3% in 2010.
- 59.7% claimed never to have used marijuana – similar to the 62.5% in 2016, 58.9% in 2014, 58.5% in 2012, and 61.0% in 2010 – while another 22.1% reported not having used it in the previous month; however, 7.4% reported having used it on six or more days in the previous month – down from 8.9% in 2016 and 11.0% in 2014 which were up slightly from 9.9% in 2012 and 8.4% in 2010.
- 93.7% of respondents claimed to have never used cocaine – slightly lower than the 96.0% reported in 2016, 2014 and 2012 – and 1.2% reported using cocaine in the previous month – virtually the same as in 2016.
- 1% or fewer of respondents reported having used methamphetamines, steroids, opiates, hallucinogens, or inhalants in the previous month; less than 2% reported having used sedatives or MDMA in the previous month; 2.8% reported using other amphetamines and less than 1.0% reported using some other illegal drug at least once in the previous month.

Table 8 shows the overall percentages of respondents who reported using these various drugs one or two days in the previous month or three or more days. The table also compares the percentages of respondents

Table 8. Percentage of Respondents Who Used Various Drugs, Alcohol or Tobacco in Past 30 Days, by Background: 2018

Substance	% 1-2 Days	% 3 or More Days	% Who Answered 1 or More Days									
			GENDER		RACE			RESIDENCE		CUMULATIVE GPA		
			Male	Female	White	Other	Internatl	On Campus	Off Campus	A	B	C/D/F
Cigarettes	4.2%	3.4%	9.9%	5.5% *	8.1%	6.3%	7.0%	5.3%	8.8% *	6.4%	7.6%	20.0% *
Tobacco from a hookah	1.0%	0.8%	2.4%	1.4%	1.6%	3.0%	1.7%	2.4%	1.6%	1.6%	2.1%	4.7%
e-Cigarettes	4.6%	8.7%	17.5%	9.3% *	17.2%	7.1%	2.9% *	15.7%	12.0%	11.8%	15.0%	20.5% *
Cigars	1.8%	1.1%	5.5%	0.6% *	3.2%	1.7%	3.5%	2.6%	3.1%	2.9%	2.4%	6.0%
Smokeless tobacco	0.7%	2.2%	5.6%	0.3% *	3.2%	3.8%	0.0% *	2.4%	3.2%	2.3%	3.3%	6.0%
Alcohol (beer, wine, liquor)	19.0%	51.6%	69.7%	71.4%	78.3%	61.5%	47.1% *	56.0%	78.2% *	67.8%	75.7%	71.4% *
Marijuana	7.7%	10.5%	16.7%	19.6%	19.6%	21.8%	6.9% *	20.2%	17.1%	15.8%	20.7%	28.2% *
Cocaine	0.6%	0.6%	1.0%	1.6%	1.2%	2.1%	0.0%	0.2%	1.7% *	0.3%	1.9%	3.6% *
Methamphetamines	0.3%	0.3%	1.2%	0.2% *	0.2%	2.1%	0.0% *	0.7%	0.5%	0.4%	0.7%	1.2%
Other amphetamines	0.8%	2.0%	3.2%	2.2%	3.0%	3.8%	0.0%	2.7%	2.7%	2.2%	3.3%	6.0%
Sedatives	0.3%	0.9%	1.0%	1.4%	1.4%	1.7%	0.0%	1.7%	1.0%	1.2%	0.2%	6.0% *
Hallucinogens	0.9%	0.1%	1.7%	0.5% *	1.1%	1.3%	0.0%	1.9%	0.5% *	1.2%	0.0%	4.8% *
Steroids	0.0%	0.4%	0.7%	0.2%	0.2%	1.3%	0.0%	1.0%	0.1% *	0.4%	0.2%	1.2%
Opiates	0.2%	0.1%	0.7%	0.0% *	0.1%	1.3%	0.0% *	0.7%	0.1%	0.4%	0.0%	1.2%
Inhalants	0.3%	0.4%	1.4%	0.2% *	0.6%	1.7%	0.0%	1.5%	0.4% *	1.0%	0.0%	3.5% *
MDMA	0.6%	0.5%	1.0%	1.3%	1.0%	2.5%	0.0% *	1.0%	1.2%	0.6%	1.7%	3.6% *
Other club drugs	0.6%	0.2%	1.0%	0.3%	0.7%	1.3%	0.0%	0.7%	0.6%	0.9%	0.5%	1.2%
Other illegal drugs	0.1%	0.3%	0.7%	0.2%	0.2%	1.3%	0.0%	0.7%	0.2%	0.4%	0.2%	1.2%

* $p(\chi^2) < .05$

using these drugs one or more days by gender, race/ethnicity, campus residence, and cumulative GPA. The table indicates that:

- Males were much more likely than females to report smoking cigarettes, cigars, and e-cigarettes, using smokeless tobacco, and somewhat more likely than females to report using methamphetamines, hallucinogens, and inhalants.
- Domestic White respondents were more likely to report drinking alcohol, and smoking e-cigarettes than their domestic Other and international counterparts.
- Those living off campus were more likely than their on campus counterparts to have smoked cigarettes, consumed alcohol, and used cocaine.
- Those with “A” GPAs were less likely than those with lower GPAs to report having smoked cigarettes, e-cigarettes, or marijuana, to have used alcohol, cocaine, sedatives, hallucinogens, inhalants, and MDMA in the previous month.

The questionnaire asked respondents to indicate what percentage of students at MSU used cigarettes, alcohol, and marijuana within the previous 30 days. On average, respondents estimated that 23.2% of students smoked cigarettes (down from 27.3% in 2016, 29.7% in 2014 and 33.0% in 2012), that 70.2% drank alcohol (virtually the same as in 2016, 2014 and 2012), and that 42.4% smoked marijuana (slightly greater than the 39.6% found in 2016, 36.6% found in 2014 and the 35.4% found in 2012).

As Table 9 indicates, 73.0% of students reported believing that the typical student smoked cigarettes in the previous month while only 7.6% of students actually did. Similarly, 88.3% of students reported believing the typical student smoked marijuana in the previous month, while only 18.2% actually reported doing so. That is, in both of these cases, the ‘typical’ student did not smoke cigarettes or marijuana so students over-estimated the prevalence substantially for both. In the case of alcohol consumption, 95.7% of students believed the typical student drank in the previous month, while 70.6% of students actually reported doing so. In this case, the ‘typical’ student did drink.

Respondents were also asked to indicate whether they thought the “typical” student at MSU had, in the previous month, used each of these substances daily, one or more days, or not at all. Table 9 shows the results for these two sets of questions. Table 9 also indicates the percentage of respondents who believed that the “typical” student used each of the drugs more often than they did personally. The table indicates that:

- For all types of substances, 40-85% of respondents indicated thinking that “typical” students use the substance more frequently than they do themselves – not only than themselves, but also more than the actual prevalence of use among all students, i.e., they substantially over-estimate how common use of these substances really is.

Table 9. Percentage of Respondents Who Used Various Kinds of Drugs, Alcohol or Tobacco in the Past 30 Days and the Percentage Who Believe Typical Students Used Various Kinds of Drugs, Alcohol or Tobacco in Past 30 Days: 2018

	Overall						
	In past 30 days, on how many days did you use:			How often do you think typical students used:			% Who Perceive Typical Use > Own Use
	Never, Not in Past 30 days	1 or More Days	Daily	Never, Not in Past 30 Days	1 or More Days	Daily	
Cigarettes	92.4%	6.9%	0.7%	27.0%	67.0%	5.9%	81.0%
Tobacco from a Hookah	98.1%	1.8%	0.1%	33.7%	63.9%	2.3%	79.2%
eCigarettes	86.7%	10.9%	2.3%	18.8%	70.2%	11.0%	83.4%
Cigars	97.1%	2.9%	0.0%	41.7%	56.3%	2.0%	73.1%
Smokeless tobacco	97.1%	2.5%	0.4%	41.3%	55.6%	3.2%	72.7%
Alcohol (beer, wine, liquor)	29.4%	69.8%	0.8%	4.3%	85.3%	10.4%	73.6%
Marijuana	81.8%	16.9%	1.3%	11.7%	78.6%	9.7%	85.0%
Cocaine	98.8%	1.1%	0.1%	63.2%	36.4%	0.4%	60.6%
Methamphetamines	99.4%	0.6%	0.0%	77.9%	21.7%	0.4%	42.4%
Other amphetamines	97.2%	2.1%	0.6%	66.6%	32.5%	0.9%	53.6%
Sedatives	98.8%	1.2%	0.0%	64.1%	35.2%	0.7%	54.5%
Hallucinogens	99.0%	1.0%	0.0%	65.3%	34.3%	0.4%	58.8%
Steroids	99.6%	0.4%	0.0%	70.4%	29.1%	0.6%	48.2%
Opiates	99.7%	0.3%	0.0%	75.6%	23.8%	0.6%	41.9%
Inhalants	99.2%	0.8%	0.0%	76.4%	23.1%	0.5%	43.7%
MDMA	98.9%	1.1%	0.0%	64.7%	34.9%	0.4%	58.6%
Other club drugs	99.3%	0.7%	0.0%	72.4%	27.2%	0.4%	46.7%
Other illegal drugs	99.6%	0.4%	0.0%	68.2%	31.1%	0.7%	51.6%

- More than three-quarters indicated thinking that typical students drink, smoke cigarettes or e-cigarettes or cigars or marijuana, or use smokeless tobacco more than they do personally.
- Among all of the illegal substances (except marijuana), more than 95% of students reported not having ever tried, yet 40-60% of students indicated thinking that typical students had tried them or used them recently.
- While less than 1% of respondents reported drinking alcohol daily in the previous month, 10.4% of respondents believed that the typical students drank daily.

UNPRESCRIBED USE OF PRESCRIPTION DRUGS. Additionally, the questionnaire asked respondents to indicate if, in the previous twelve months, they had taken any of several prescription drugs that were not prescribed to them. Among all respondents, 1.7% reported having taken an antidepressant (e.g., Celexa, Lexapro, Prozac, Wellbutrin, Zoloft), 0.8% reported having taken an unprescribed erectile dysfunction drug (e.g., Viagra, Cialis, Levitra), 4.4% reported having taken an unprescribed pain killer (e.g., OxyContin, Vicodin, Codeine), 3.5% reported having taken an unprescribed sedative (e.g., Xanax, Valium), and 9.8% reported having taken an unprescribed stimulant (e.g., Ritalin, Adderall).

Figure 5 shows the findings for each of these across the five surveys since 2010. The figure indicates that there has been virtually no change since 2010 in the percentages of students who reported using antidepressants, erectile dysfunction medications or sedatives. However, the figure also shows that there have been declines in the percentages who reported using stimulants and pain killers since 2010.

More than eight out of ten (87.1% -- up from 81.6% in 2010) reported having taken none of these types of drugs without a prescription in the previous year, while 12.9% reported having taken one of these types. This represents a 31% reduction in the prevalence of prescription drug misuse since 2010.

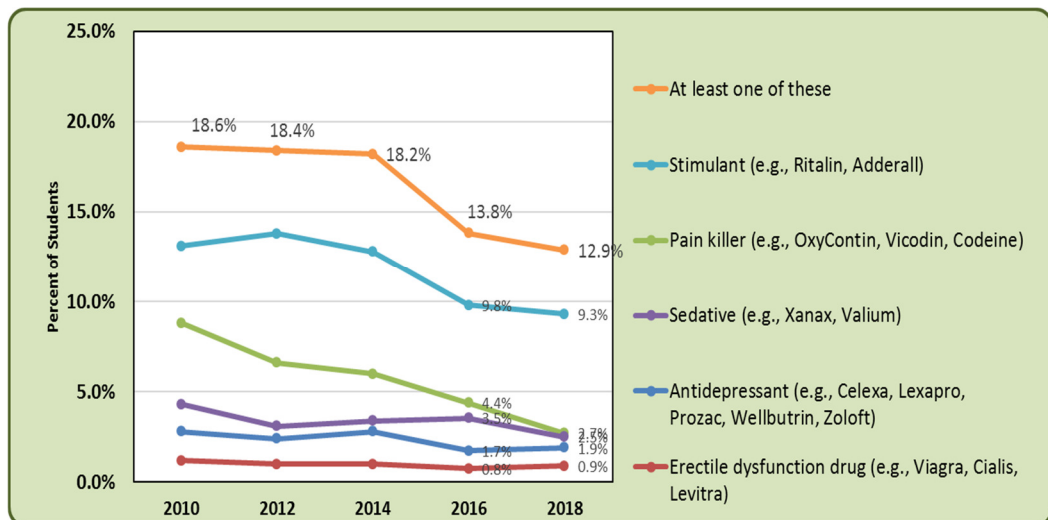


Figure 5. Percentage Misusing Prescription Drugs: 2010-2018

ALCOHOL USE AND DRIVING. The questionnaire asked respondents if, in the previous 30 days, they had driven after drinking any alcohol and if they had driven after having had five or more drinks. Figure 6 below shows the percentage of students in each of the surveys from 2000 to 2018 who said they had done each of these at least once in the previous month (excluding the students who said they do not drink or do not drive).

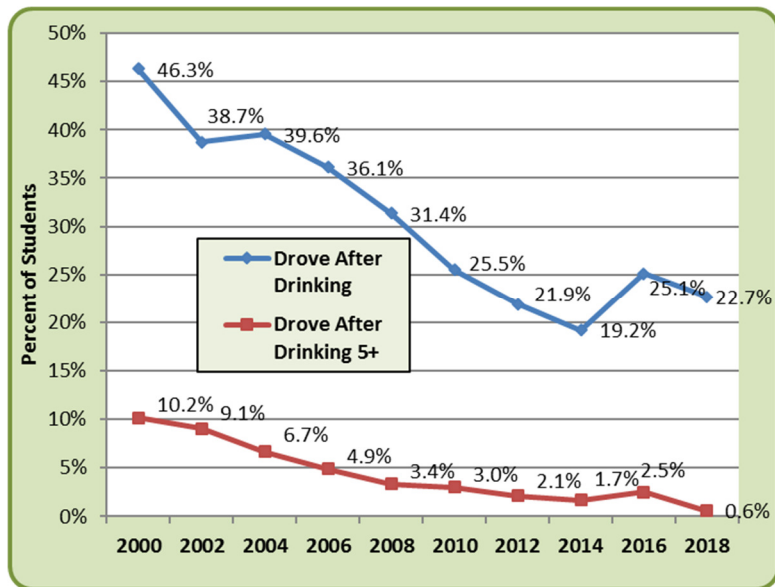


Figure 6. Percentage Who Drove After Drinking, Consuming 5 or More Drinks: 2000 to 2018

- 22.7% of the respondents (who drive and who drink) reported having driven after drinking at least some alcohol at least once in the previous 30 days – this is down from 25.1% in 2016 although still up from the 19.2% in 2014, but still about half the 46.3% in 2000.
- Less than 1% of the respondents who drink and who drive reported driving after having five or more drinks at least once in that time, down from 2.5% in 2016 and 1.7% in 2014 and substantially down from the 10.2% in 2000 – a 94% decline.

In 2018, among respondents who drive and who drink, there were no significant differences between males and females.

Graduate/professional students were more likely to drive after drinking than were undergraduates (39.7% vs. 16.4% -- both down from the 47.9% vs. 18.9% in 2016 although still up slightly from 36.5% vs. 14.3% in 2014) partly because more of them live off campus. Those who live off campus were more likely to drive after drinking than those who live on campus (27.7% vs. 7.9% -- both down from the 31.3% vs. 10.7% in 2016). Additionally, older students were more likely to drive after drinking than were younger students (40.2% among 24+-year-olds vs. 33.6% among 22-23-year-olds vs. 13.4% among 20-21-year-olds vs. 9.5% among 18-19-year-olds).

There were no significant differences regarding driving after drinking 5 or more drinks by sex, age group, academic status, residence, race/citizenship, or GPA.

ALCOHOL AND THE LAST TIME PARTIED. Respondents were asked to indicate for how many hours they drank alcohol the last time they “partied” and then the number of alcoholic drinks they consumed during this time. The results for all respondents are shown in Table 10.

The table indicates that, among all respondents, the average number of drinks consumed the last time “partied” or socialized was 3.57– compared to 3.31 in 2016, 4.08 in 2014 and 4.46 in 2012; however, this average includes the numerous students who do not drink alcohol at all and those who did not drink the last time they “partied” or socialized. The second row of the table and the subsequent analyses are based on only those respondents who reported drinking at least one drink the last time they “partied.”

- Among those who drank, the average number of drinks reported was 4.74, up slightly from 4.52 in 2016, but still down from 5.16 in 2014 and 5.59 in 2012.
- The average number of hours over which the drinking occurred increased in 2018 to 3.82 compared to 3.61 in 2016 but similar to the 3.86 found in 2014 (i.e., 3.82 vs. 3.86). Consequently, the average Blood Alcohol Content (BAC) was the same in 2018 as in 2016 (0.063) and lower than in 2014 (0.074) and 2012 (0.083).
- The average number of drinks reported for males increased and females decreased in 2018 compared to 2016 (i.e., males = 5.91 vs. 5.13; females = 3.74 vs. 3.88 in 2016) although both are lower than in 2014 and 2012. The calculated BAC for males increased slightly in 2018 (0.066 vs. 0.056 in 2016) while it continued to decline for females (0.060 vs. 0.070 in 2016).
- Males reported, on average, more occasions in the previous two weeks than females in which they consumed five or more drinks. However, the average number of occasions reported by males was

Table 10. Mean Numbers of Drinks, Hours Drinking, Calculated Blood Alcohol Content (BAC) Last Time “Partied,” and Times Drank 5 or More Drinks in Past Two Weeks, Overall and by Demographic Group: 2018

Demographic Group	Mean			
	Number Of Drinks	Hours Drinking	BAC	Number Times Drank 5+
All respondents	3.57	2.88	0.047	.80
Respondents who drank	4.74	3.82	0.063	1.04
Gender				
Males	5.91	3.87	0.066	1.45
Females	3.74	3.78	0.060	.69
	p<.05	NS	NS	p<.05
Race				
White	4.96	3.99	0.066	1.2
Other	4.36	3.54	0.064	.8
International	3.80	3.09	0.034	.6
	p<.05	p<.05	p<.05	p<.05
Age				
18-19	5.11	3.44	0.085	1.1
20-21	5.14	3.74	0.071	1.2
22-23	5.43	4.45	0.066	1.4
24 or older	3.27	3.83	0.028	.5
	p<.05	p<.05	p<.05	p<.05
Residence				
On campus	5.18	3.57	0.080	1.0
Off campus	4.57	3.92	0.056	1.1
	p<.05	p<.05	p<.05	NS
GPA				
A	4.56	3.77	0.061	.94
B	5.03	3.90	0.066	1.19
C or less	5.16	3.83	0.072	1.30
	NS	NS	NS	p<.05
Member of Frat./Soror.				
YES	5.86	4.16	0.077	1.83
NO	4.57	3.77	0.061	.91
	p<.05	p<.05	p<.05	p<.05
Student Status				
Undergraduate	5.20	3.81	0.075	1.22
Grad./Prof.	3.36	3.86	0.029	.51
	p<.05	NS	p<.05	p<.05

NS: Not significant F statistic

slightly higher in 2018 (1.45) than in 2016 (1.34) whereas it declined among females (0.69 times vs. 0.82 in 2016).

- On average, domestic White respondents reported drinking more drinks over longer periods of time than domestic students of Other racial or ethnic backgrounds and reported more occasions in the previous two weeks when they consumed five or more drinks. International students reported lower averages on each of these than domestic students.
- In general, younger students reported drinking similar numbers of drinks but over shorter periods of time resulting in higher blood alcohol levels on average than their older student counterparts.
- On campus students drank a somewhat greater numbers of drinks and over shorter periods of time compared to off campus students resulting in, on average, higher blood alcohol levels. This was similar to the results of the four previous surveys.
- Respondents who were members of fraternities or sororities reported drinking, on average, more drinks resulting in appreciably higher average blood alcohol levels compared to non-members. The average numbers of drinks and BAC reported in 2018 were similar for both groups to their results in 2016 and 2014 (members: BAC = 0.077 in 2018 vs. 0.072 in 2016 vs. 0.089 in 2014; non-members: BAC = 0.061 in 2018 vs. 0.062 in 2016 vs. 0.072 in 2014). Members of fraternities or sororities reported drinking five or more drinks on more occasions in the previous two weeks than did non-members (i.e., 1.8 vs. 0.9) but the average number of occasions reported by fraternity/sorority members was still substantially lower than in 2014 (i.e., 2.3).
- The average number of drinks, blood alcohol level, and number of occasions they drank five or more drinks were significantly greater among undergraduates than among graduate and professional students.

Alcohol consumption is an area where there have been concerted efforts at MSU since 2001 to reduce high-risk drinking and increase behaviors or strategies that may protect the drinker from some adverse consequences. The goal of the effort is not to increase abstinence but, rather, to reduce the likelihood of harm as a consequence of alcohol consumption. Figure 7 (along with Figure 6 and Figures 8-11) helps assess the impact of those efforts.

Figure 7 indicates that there has been little change from 2002 to 2018 in the percentage of graduate/ professional students who reported consuming 0-4 drinks when they last “partied” while the percentage of undergraduates doing so has fluctuated slightly above or slightly below roughly 55% until increasing in 2016 and 2018. More importantly, Figure 7 shows that, there have been relatively steady declines in the percentages of both undergraduates and graduate/professional students who reported consuming eight or more drinks the last time they “partied.”

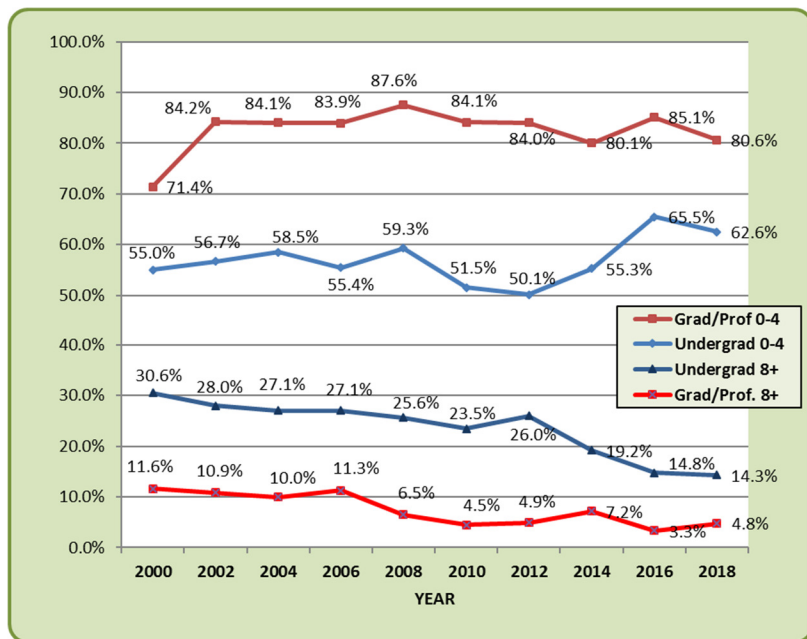


Figure 7. Percentage of Undergrads, Graduate/Professional Students Who Reported 0-4, 8+ Drinks the Last Time They "Partied:" 2000 to 2018

The overall impact of the effort is also reflected in Figure 8. This figure shows the average numbers of drinks reported by all students, by just undergraduates, and by just graduate/professional students the last time they “partied” for the surveys conducted from 2000 to 2018.

The figure shows that the average number of drinks reported by undergraduates had declined from 5.6 in 2000 to 4.8 in 2010 (a 14% decrease), increased to 5.1 in 2012, and then declined to 4.5 in 2014 and 3.8 in 2018. The figure also shows that there had been a continuing decline among the graduate and professional students from 4.4 drinks 2000 to 2.3 in 2012, rose to 2.9 in 2014, and then declined to 2.7 in 2018. For all students, the decline has been from 5.4 in 2000 to 3.6 in 2018 – a 34% decline.

The approach being used to reduce high-risk drinking assumes that students often over-estimate what most students do and attempts to correct this misperception by distributing accurate information about what most students actually do. If this approach works, then there

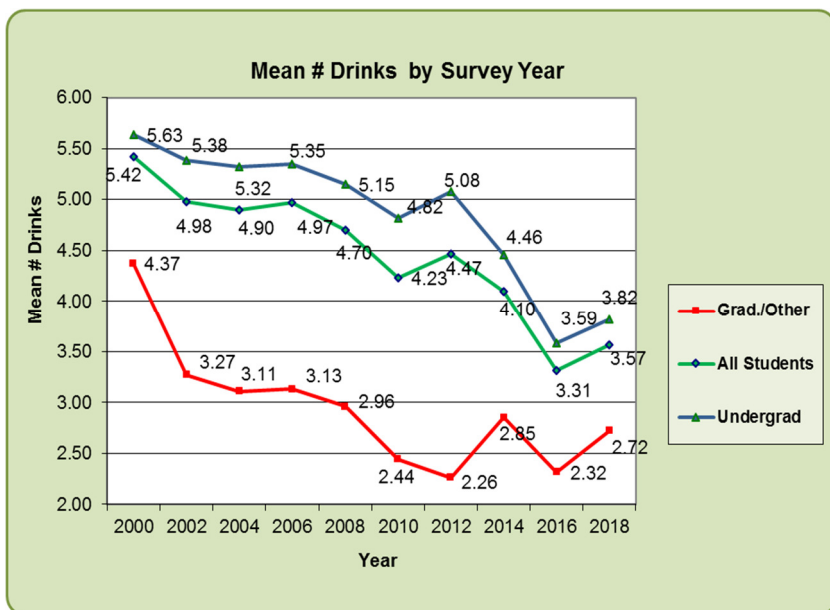


Figure 8. Average Number of Drinks Consumed Last Time "Partied" for All Students, Undergrads, Grad/Professional Students: 2000 to 2018

should be a decrease in the perceived number of drinks students believe that students typically consume when they party as the efforts to correct the misperception continue over time. Respondents were asked to indicate how many alcoholic drinks they thought the “typical” MSU student had the last time he or she partied. On average, respondents indicated thinking that the “typical” student drank 4.9 drinks the last time the “typical” student “partied”. This is slightly less than the 5.1 drinks reported in 2016 and the 5.3 drinks reported in 2014, and is much less than the 6.1 drinks students believed to be typical in 2000 before the effort to correct the misperception began.

Figure 9 shows the change from 2000 to 2018 in the average number of drinks students perceived the “typical” student drank the last time he or she “partied”.

The figure indicates that:

- There has been a substantial downward shift in students’ perceptions as to the number of drinks the “typical” student consumes.
- Undergraduates believe the “typical” student drank significantly more than graduate and professional students believe.

Over the past eighteen years while the campaign to reduce high risk drinking has been underway, student perceptions as to what amount of drinking is typical has changed, the average number of drinks students consume when partying and percentages of students who drink larger quantities has declined, and the percentages of students who drive after they have been drinking have declined.

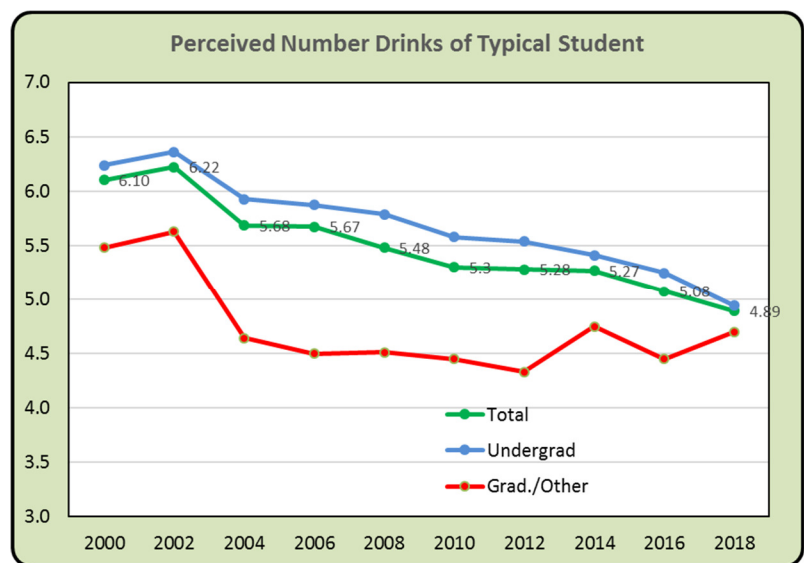


Figure 9. Average Number of Drinks All Students, Undergrads, Grad/Professional Students Believe "Typical" Student Drank Last Time "Partied:" 2000 to 2018

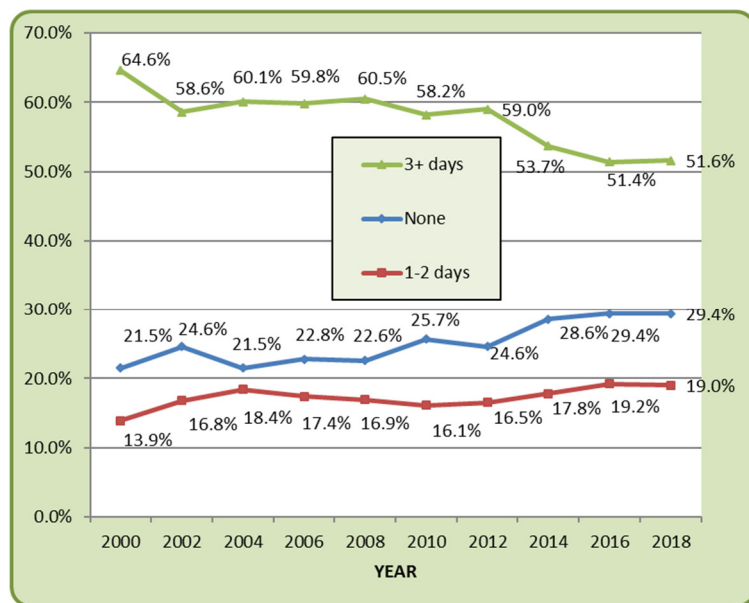


Figure 10. Percent Distribution Regarding Drinking Frequency: 2000 to 2018

Additionally, Table 7 showed the percentages of students who reported how often they drink alcohol. For purposes of comparison across time, we have regrouped the responses to the item regarding alcohol use in Table 7 into three categories – do not drink alcohol at all or not in the past month, drank alcohol one or two days in the past month, and drank alcohol three or more days in the past month. Figure 10 shows the percentage distribution of this breakdown among all students for each of the survey years since 2000.

The figure indicates there has been a general increase in the percentage of students who drink infrequently – not at all or only one or two days per month, and a general decrease

in the percentage of students who drink three or more times per month. Since 2000, the percentage of students who reported drinking three or more days in the previous month declined by 20%, while the percentage of students who reported not drinking at all or not in the previous month increased by 37%.

ALCOHOL-PROTECTIVE BEHAVIORS. The questionnaire also included a series of questions regarding how often the respondent did various things to protective themselves from possible harms associated with alcohol consumption, e.g., having a designated driver, eating food before or while drinking, setting a drink limit in advance, pacing consumption to one or fewer drinks per hour, etc. These activities are often referred to as “protective behaviors” since they have been shown to reduce the likelihood of adverse consequences of alcohol consumption. The questionnaire used since 2010 included two such activities that were not asked about on the questionnaires used from 2000 to 2008 and did not ask about one activity that had been included previously. Therefore, comparisons to earlier survey results are limited. The comparisons are further compromised by a change in how the response options to the questions were formatted.

Table 11 shows the percentages of respondents who drink who reported doing each of eleven different strategies for drinking responsibly either always, usually, sometimes, rarely, or never. The results for each of these was at its lowest point in 2010, but the percentages of students who reported always or most of the time doing these have increased generally from 2010 to 2018. The table indicates that:

- More than half indicated they at least sometimes pace their drinking to 1 or fewer drinks per hour (56.5% -- virtually the same as in 2016 and up from 51.0% in 2014), avoid drinking games (50.4% -- down slightly from 53.4% in 2016 and 52.2% in 2014), have a friend let them know when they have had enough (57.8% -- the same as in 2016 and up from 54.0% in 2014), or choose not to drink (55.7%, down from 62.9% in 2016 and 59.8% in 2014).
- More than six out of ten reported that they at least sometimes alternate non-alcoholic drinks with alcoholic beverage (64.6%, down slightly from 66.8% in 2016 but still up from 61.5% in 2014), or determine in advance not to drink more than a specific number of drinks (62.4%, similar to the 63.8% in 2016 but down from 65.3% in 2014).
- More than eight out of ten reported that they at least sometimes keep track of the number of drinks they have had (82.7%, down slightly from 85.7% in 2016 but still up slightly from 81.8% in 2014) and that they at least sometimes stick with the same kind of alcohol (83.4%, up slightly from 82.1% in 2016 and virtually the same as the 83.5% in 2014).
- More than nine out of ten reported that they at least sometimes use a designated driver (94.1%, up slightly from the 92.9% in 2016 and the 93.2% found in 2014), stay with the same group of friends while drinking (96.7%, the same as in 2016 but up very slightly from 95.5% in 2014), or eat before or while drinking (96.3%, up slightly from 95.0% in 2016 but still down slightly from 97.2% in 2014).

Table 11. Percentage Distribution How Often Respondents Who Partied Took Various Steps to Drink Responsibly: 2018

During the last 12 months, if you partied, how often	Most of the Time				
	Never	Rarely	Sometimes	the Time	Always
Alternated non-alcoholic with alcoholic beverages	15.9%	19.5%	30.4%	25.3%	9.0%
Avoid drinking games	23.7%	25.9%	20.5%	14.8%	15.1%
Chose not to drink alcohol	17.8%	26.6%	38.6%	14.2%	2.9%
Determined not to exceed number drinks	22.9%	14.7%	23.7%	23.7%	15.0%
Ate before/during drinking	1.8%	1.9%	12.1%	43.3%	40.9%
Have friend let you know when you've had enough	26.0%	16.2%	15.9%	18.9%	23.0%
Kept track of how many drinks were having	7.0%	10.3%	15.2%	26.2%	41.3%
Paced drinks to 1 or fewer per hour	21.1%	22.4%	24.4%	18.8%	13.4%
Stayed with same group of friends	1.4%	1.8%	6.6%	37.7%	52.4%
Stick with one kind of alcohol	3.7%	12.9%	27.9%	40.1%	15.3%
Use a designated driver	3.8%	2.1%	6.5%	14.2%	73.4%

- Among those who drink at least occasionally, the average number of protective behaviors respondents reported doing at least sometimes was 7.9 – similar to the 8.0 reported in 2016 and the 7.9 reported in 2014, the 7.7 reported in 2012 and the 7.8 found in 2010.
 - Among those who drank 0-4 drinks the last time they “partied”, the average number of protective behaviors they reported doing at least sometimes was 8.6 – virtually the same as the 8.7 in 2016, 8.8 in 2014 and 8.6 in 2012.
 - Among those who drank 5-7 drinks, the average number of protective behaviors they reported doing at least sometimes was 7.5, as it was in 2016, 2014 and 2012.
 - Among those who drank 8 or more drinks, the average number of protective behaviors they reported doing at least sometimes was 6.0, down from 6.5 in 2016, 6.2 in 2014 and 6.3 in 2012.

Table 12 compares the responses to these based on gender, race, age, residence location, GPA, student status, and membership in Greek organizations. Table 12 shows the percentage of respondents who said they always or usually do the various protective behaviors. Table 12 indicates that:

- Females were more likely than males to report always or usually doing ten of the eleven protective behaviors – although not necessarily all at the same time. The protective behavior on which males and females did not differ significantly was choosing not to drink.
- Domestic White respondents were less likely than their domestic counterparts of Other racial or ethnic backgrounds and international students to avoid drinking games, choose not to drink, determine not to exceed a chosen number of drinks, have a friend tell them when they have had too many drinks, keep track of the number of drinks they consume, and pace their drinking to one drink per hour or less. International students were less likely than their domestic counterparts to eat before or during drinking and to stay with the same group of friends, but were more likely to pace their drinking.
- There were statistically significant differences across age groups of respondents on eight of the eleven protective behaviors; however, the patterns of the differences were not consistent.

Table 12. Percentage of Respondents Who Partied Who Always or Usually Took Various Steps to Drink Responsibly, by Background Characteristics: 2018												
During the last 12 months, if you partied, how often did you...		Alternate Alc. & Non-Alc. Drinks	Avoid Drinking Games	Choose Not to Drink	Determine not to Exceed Number Drinks	Ate Before/ During Drinking	Have Friend Tell When Had Enough	Track How Many Drinks	Paced Drinks ≤ 1 per Hour	Stay with Friends	Stick with One Kind of Alcohol	Use Designated Driver
Gender	Males	28.5%	25.4%	14.8%	32.1%	79.5%	32.6%	60.0%	20.6%	84.1%	48.1%	82.6%
	Females	38.9%	33.5%	18.9%	44.2%	88.0%	49.8%	73.9%	41.6%	95.1%	61.5%	91.6%
		p<.05	p<.05	NS	p<.05	p<.05	p<.05	p<.05	p<.05	p<.05	p<.05	p<.05
Race	White	34.1%	27.6%	13.2%	34.4%	85.6%	38.5%	64.8%	29.4%	92.1%	54.4%	89.3%
	Other	35.6%	30.2%	24.9%	51.1%	82.3%	52.5%	75.1%	36.1%	88.9%	57.9%	87.4%
	International	33.0%	47.1%	30.3%	47.7%	76.1%	47.8%	72.5%	45.6%	77.3%	59.6%	75.6%
		NS	p<.05	p<.05	p<.05	p<.05	p<.05	p<.05	p<.05	p<.05	NS	p<.05
Age	18-19	37.7%	26.7%	18.3%	41.3%	82.2%	51.9%	69.1%	26.4%	90.9%	51.0%	89.3%
	20-21	32.0%	22.1%	15.5%	33.1%	84.4%	40.8%	62.4%	24.5%	87.3%	55.4%	91.3%
	22-23	31.5%	22.0%	12.0%	37.6%	82.9%	41.5%	68.5%	32.7%	92.1%	50.0%	87.8%
	24 or older	36.4%	51.4%	22.5%	46.4%	86.4%	34.4%	73.3%	49.3%	92.0%	63.3%	80.0%
		NS	p<.05	p<.05	p<.05	NS	p<.05	p<.05	p<.05	NS	p<.05	p<.05
Residence	On campus	33.9%	31.6%	22.1%	38.4%	84.2%	51.3%	67.6%	25.9%	89.9%	55.0%	88.0%
	Off campus	34.4%	29.1%	15.0%	38.8%	84.2%	38.1%	67.5%	34.8%	90.2%	55.7%	87.4%
		NS	NS	p<.05	NS	NS	p<.05	NS	p<.05	NS	NS	NS
GPA	A	34.9%	30.2%	18.1%	40.3%	83.9%	40.5%	67.6%	34.1%	91.3%	56.3%	86.5%
	B	33.4%	28.7%	15.6%	36.3%	85.4%	44.7%	67.6%	29.0%	88.6%	57.3%	88.5%
	C or less	30.4%	30.4%	13.0%	34.8%	78.3%	39.1%	63.8%	31.9%	91.2%	42.0%	94.0%
		NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Member of Fraternity or Sorority												
		YES	40.3%	16.4%	3.2%	31.0%	79.4%	37.8%	57.0%	24.2%	82.8%	46.5%
		NO	33.3%	31.9%	19.0%	39.8%	84.9%	42.5%	69.1%	33.3%	91.2%	56.8%
		NS	p<.05	p<.05	NS	NS	NS	p<.05	p<.05	p<.05	p<.05	p<.05
Student Status	Undergrad	33.5%	24.5%	16.2%	36.2%	82.9%	44.1%	65.1%	26.1%	88.9%	53.5%	89.6%
	Grad./Prof.	36.3%	45.6%	20.0%	46.5%	87.3%	35.3%	74.6%	49.6%	93.5%	61.3%	81.5%
		NS	p<.05	NS	p<.05	NS	p<.05	p<.05	p<.05	p<.05	p<.05	p<.05
NS: Not significant Chi-square statistic												

- Respondents living on campus were more likely than their off campus counterparts to report choosing not to drink, and to have a friend tell them when they have had too much to drink, but were less likely to pace their drinking to one drink per hour or less.
- There were no significant differences in the use of protective behaviors across GPA categories.
- Members of fraternities or sororities differed significantly from non-members on seven of the eleven protective behaviors. Members were less likely than non-members to avoid drinking games, choose not to drink, keep track of how many drinks they have consumed, pace their drinking, stay with the same group of friends, and stick with one kind of alcohol. They were somewhat more likely than non-members to use a designated driver.
- Graduate/professional students were more likely than undergraduates to always or most of the time do six of the eleven protective behaviors but were less likely than undergraduates to report using a designated driver this often or to have a friend tell them when they have had too much.

ALCOHOL AND UNDESIRABLE CONSEQUENCES. The questionnaire asked respondents to indicate if they had experienced, at least once during the last twelve months, any of seven different undesirable events as a consequence of their drinking. Table 13 shows the results for each of these events.

The table shows the percentage of respondents who drink at least sometimes who reported that the event in question did happen to them during the last year. The table shows the overall results for 2018, 2016, 2014, 2012 and 2010. Table 13 indicates that:

- More than a third of respondents who drink reported having done something when drinking that they later regretted (36.3%) -- down slightly from the 39.5% found in the earlier years. Three out of ten (30.9%) reported having drunk to the point where they did not know where they were or what they did (also down from the earlier years);
- Less than one in seven (14.4% -- down from all prior years except 2016) reported having injured themselves at least once as a consequence of their drinking; 23.1% reported having had unprotected sex as a consequence of their drinking -- higher than any of the prior years; and 2.4% reported having seriously considered suicide -- similar to the results of the prior surveys.

The table also compares the likelihood of experiencing these events by gender, race/ethnicity, age group, residence location, GPA, and membership in a Greek organization. The table indicates that:

- Males were more likely than females to report having done something they later regretted, not knowing where they were or what they did, getting into trouble with the police, having unprotected sex, and having injured someone else.

Table 13. Percentage of Respondents Who Drink Who Report Experiencing Various Health Threatening Consequences of Their Drinking Within the Last Year, Overall and by Background: 2018

Within the last 12 months, have you experienced ____ as a consequence of your drinking?		% Who Said Yes								
		Did, Later Regretted	Forgot Where, What	Got in Trouble With Police	Had Sex Without Giving Consent	Had Sex Without Getting Consent	Had Unprotected Sex	Injured Self	Injured Other	Seriously Considered Suicide
Overall:	2018	36.3%	30.9%	1.9%	1.4%	0.8%	23.1%	14.4%	1.2%	2.4%
	2016	39.5%	31.8%	2.0%	3.0%	0.8%	20.1%	13.7%	1.4%	3.5%
	2014	40.1%	38.8%	4.3%	1.3%	0.7%	22.0%	15.9%	2.3%	3.0%
	2012	46.6%	42.2%	6.2%	1.5%	0.9%	22.9%	20.2%	3.1%	2.1%
	2010	37.5%	37.2%	4.9%	1.8%	0.5%	17.6%	16.2%	2.3%	1.0%
Gender	Males	41.1%	34.4%	3.3%	1.2%	1.4%	26.4%	15.2%	2.1%	3.3%
	Females	32.4%	28.0%	0.8%	1.6%	0.4%	20.4%	13.8%	0.4%	1.6%
Race		p<.05	p<.05	p<.05	NS	NS	p<.05	NS	p<.05	NS
	White	40.0%	34.3%	1.8%	1.5%	0.4%	24.4%	15.0%	0.9%	2.7%
	Other	26.1%	24.7%	2.3%	1.7%	2.8%	21.1%	13.7%	2.8%	2.8%
	International	29.2%	18.0%	2.2%	0.0%	0.0%	15.9%	11.2%	0.0%	0.0%
Age		p<.05	p<.05	NS	NS	p<.05	NS	NS	NS	NS
	18-19	48.5%	38.7%	2.5%	3.0%	1.5%	21.9%	16.9%	3.5%	4.5%
	20-21	37.7%	34.5%	2.0%	1.7%	0.8%	25.7%	15.6%	0.6%	2.5%
	22-23	45.4%	39.5%	3.1%	0.6%	0.0%	25.9%	20.9%	0.0%	1.2%
	24 or older	16.7%	12.2%	0.5%	0.0%	0.9%	18.2%	5.9%	0.9%	1.4%
Residence		p<.05	p<.05	NS	p<.05	NS	NS	p<.05	p<.05	NS
	On campus	38.9%	32.3%	1.9%	1.9%	1.5%	18.5%	12.9%	2.6%	2.9%
	Off campus	35.3%	30.5%	1.9%	1.2%	0.6%	24.9%	15.0%	0.7%	2.2%
GPA		NS	NS	NS	NS	NS	p<.05	NS	p<.05	NS
	A	35.0%	28.8%	1.6%	1.6%	1.0%	21.6%	14.1%	1.6%	2.2%
	B	38.1%	33.6%	2.4%	0.9%	0.6%	23.0%	14.9%	0.6%	2.6%
	C or less	44.1%	39.4%	2.9%	2.9%	0.0%	33.3%	17.6%	1.5%	4.3%
Member of Fraternity or Sorority		NS	NS	NS	NS	NS	NS	NS	NS	NS
	YES	52.8%	49.6%	0.8%	0.8%	0.0%	35.4%	25.4%	0.8%	1.6%
	NO	33.9%	28.1%	2.2%	1.6%	1.0%	21.2%	12.7%	1.2%	2.6%
Student Status		p<.05	p<.05	NS	NS	NS	p<.05	p<.05	NS	NS
	Undergrad	43.0%	36.0%	2.5%	1.9%	1.2%	24.9%	17.2%	1.6%	2.9%
	Grad./Prof.	17.6%	16.4%	0.4%	0.0%	0.0%	17.8%	6.6%	0.4%	1.2%
		p<.05	p<.05	p<.05	p<.05	NS	p<.05	p<.05	NS	NS
NS: Not significant Chi-square statistic										

- Domestic students were more likely than international students to report having done something they later regretted, and having forgotten where they were or what they did.
- Respondents 24 or older were significantly less likely to report experiencing the various undesirable consequences of drinking on four of the nine undesirable outcomes.
- Off campus respondents were more likely than their on campus counterparts to report having had unprotected sex, and injuring someone else.
- There were no significant differences across GPA groups on any of the types of adverse outcomes.
- Undergraduates were more likely than graduate/professional students to report having done something they later regretted, having forgotten where they were or what they had done, getting in trouble with the police, having sex without giving consent, having unprotected sex, and having injured themselves.
- Members of fraternities or sororities were more likely than non-members to report doing something they later regretted, having drunk to the point where they did not know where they were or what they did, having unprotected sex, and injuring themselves.

Figure 11 shows the changes that have occurred from 2000 to 2018 in the percentages of students who reported experiencing each of these adverse outcomes as a consequence of drinking. Three of the nine outcomes listed in Table 13 were newly added to the version of the questionnaire administered starting in 2010, and one (being involved in a fight) was no longer included after 2008. Additionally, starting in 2010, the questions asked respondents whether or not they had experienced these outcomes over the past twelve months while the questionnaire administered from 2000 through 2008 asked if they had experienced these outcomes during the last school year. Because of the longer time

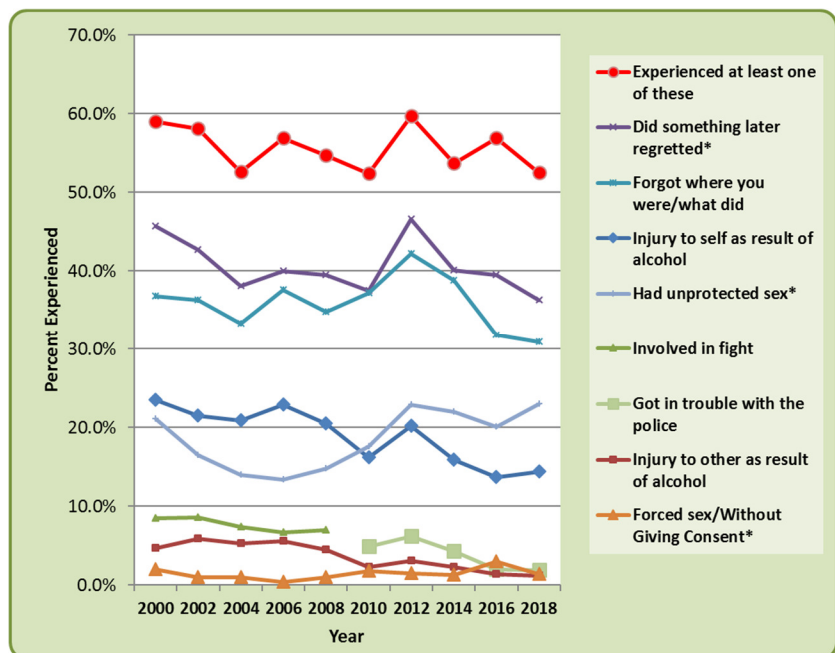


Figure 11. Percentage of Students Who Drink Who Experienced Various Undesirable Outcomes of Drinking in Past Year: 2000 to 2018

frame referred to, the percentages should be a bit higher in 2010 and thereafter compared to earlier even if no real increase in the likelihood of experiencing harm from drinking occurred.

Just over half the students who drink (52.5%) reported experiencing at least one of these adverse outcomes in 2018 – (down from 56.9% in 2016, 53.7% in 2014, and 59.7% in 2012). The average number of adverse outcomes reported per student was 1.0, virtually the same as in 2016 and 2014 but still down somewhat from 1.4 types of adverse outcomes in 2012.

Figure 11 shows that there had been a general decline in the reported incidence of most of these adverse outcomes from 2000 to 2018; although having unprotected sex has increased overall since 2000.

Overall, from 2000 to 2018, the percentage of students who, as a consequence of their drinking, reported:

- Doing something they later regretted declined 21%
- Forgot where they were or what they did declined 16%
- Injuring themselves declined 39%
- Being involved in a fight – to 2008 only, not asked in 2010 or subsequent surveys – declined 18%
- Injuring someone else declined 75%
- Having forced sex increased 30% (although this should be viewed cautiously because of wording changes in the question) and
- Experiencing at least one of the adverse outcomes decreased 11%

From 2010 to 2018 the percentage of students who, as a consequence of their drinking, reported getting in trouble with the police declined by 61%.

ALCOHOL AND ACADEMIC PERFORMANCE. In a later section of the questionnaire, respondents were asked whether their academic performance had been affected by 31 different health, behavior or relationship issues in the past twelve months and, if so, to what degree. One of the items listed was alcohol use. In 2018, 4.4% of all respondents indicated that their academic performance had been negatively impacted as a result of their alcohol use – down slightly from 5.8% in 2016 and 4.8% reported in 2014. Less than one in twenty-five (3.5%) reported receiving a lower grade on an exam or a project because of their drinking, 0.7% reported receiving a lower grade in a course, and 0.3% reported having to drop a course or take an incomplete as a result of their drinking.

Figure 12 below shows the percentage of students experiencing the adverse academic effects of drinking based on the NCHA surveys conducted from 2000 to 2018. The figure indicates that there has been a reduction in the percentage of students negatively impacted academically by alcohol use. From 2000 to 2018, the percentage of students who:

- Dropped a course or took an incomplete because of their alcohol use declined by 25%.
- Received a lower grade in a course because of their alcohol use declined by 70%.
- Received a lower grade on an exam or project because of their alcohol use decline by 53%.
- Experienced any of these negative impacts on their academic performance because of their alcohol use declined by 57%.

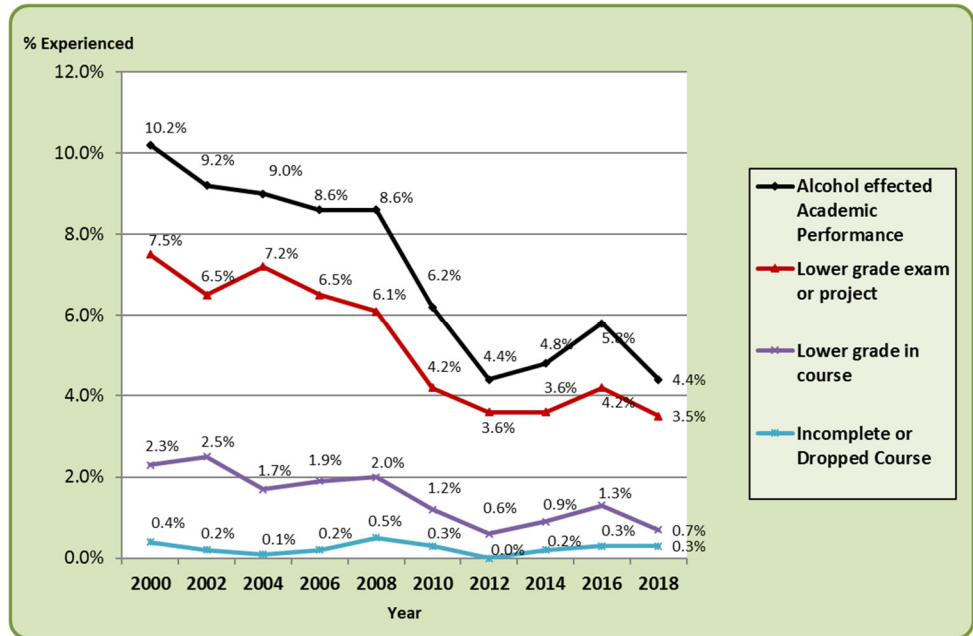


Figure 12. Percentage of Students Experiencing Academic Harm as Result of Their Alcohol Use: 2000 to 2018

RESULTS: Sexual Behavior

The questionnaire included a series of questions regarding sexual behaviors and steps to prevent conception and sexually transmitted diseases. Table 14 shows the percentage distribution of the number of different partners, if any, with whom respondents reported having oral, vaginal, or anal sex during the previous twelve months.

The table indicates that:

- More than a quarter (27.7%) reported having no sexual partners during the last year – down slightly from 31.4% in 2016 and 29.0% in 2014, but greater than the 25.9% in 2012 and 2010 and 23.9% in 2008.
- 48.0% reported only a single partner – up from the 44.4% in 2016.
- 10.1% of respondents reported having had four or more sexual partners during the past year – very similar to the 9.1% found in 2016, the 10.0% found in 2014 and the 9.8% in 2012 and 2010.

Table 14 also indicates that:

- Graduate/professional students were less likely than undergraduates to report not having had any sexual partners, but were much more likely than

Within the past 12 months, with how many partners have you had oral sex, vaginal intercourse, or anal intercourse?		% of All Respondents					Ave. Number of Partners
		None	1	2	3	4 or More	
Overall		27.7%	48.0%	8.6%	5.6%	10.1%	1.7
Student Status							
	Undergrad	29.9%	42.9%	9.5%	6.1%	11.5% *	1.8 *
	Grad/Professional	20.9%	63.4%	5.8%	4.1%	5.8%	1.3
Gender							
	Males	30.4%	43.2%	6.7%	6.7%	13.0% *	2.1 **
	Females	25.2%	52.4%	10.4%	4.5%	7.5%	1.3
Race							
	White	22.4%	51.0%	8.7%	7.1%	10.8% *	1.8
	Other	34.3%	41.6%	9.9%	2.6%	11.6%	1.6
	International	43.2%	42.6%	6.5%	2.4%	5.3%	1.3
Age							
	18-19	36.5%	38.9%	10.1%	4.9%	9.7% *	1.6 **
	20-21	29.9%	43.0%	9.3%	5.9%	12.0%	2.0
	22-23	16.5%	55.5%	7.7%	7.7%	12.6%	2.0
	24 or older	22.9%	60.6%	6.5%	4.3%	5.7%	1.3
Residence							
	On campus	41.6%	37.9%	7.4%	4.7%	8.4% *	1.5
	Off campus	20.6%	53.2%	9.2%	5.9%	11.0%	1.8
GPA							
	A	28.0%	49.1%	7.2%	5.9%	9.8% *	1.6 **
	B	27.4%	49.0%	8.5%	6.0%	9.2%	1.6
	C or less	25.9%	32.9%	17.6%	3.5%	20.0%	3.2
Member of Fraternity/Sorority							
	YES	17.7%	41.8%	9.2%	8.5%	22.7% *	2.8 **
	NO	29.0%	48.9%	8.5%	5.2%	8.5%	1.6
Sexual Orientation							
	Heterosexual	27.1%	49.2%	8.7%	5.7%	9.3% *	1.5 **
	Gay/Lesbian	23.3%	37.2%	4.7%	7.0%	27.9%	6.7
	Bisexual	24.0%	48.0%	14.0%	2.0%	12.0%	2.0
	Unsure/Other	57.7%	15.4%	3.8%	7.7%	15.4%	1.5
		* $p(\chi^2) < .05$ ** $p(F) < .05$					

undergraduates to report having had only one partner in the past year. It is important to note in this regard that 30.0% of the graduate/professional students were currently married at the time of the survey (greater than the 25.3% in 2016) compared to only 2.0% of the undergraduates.

- Males were more likely to report either no partners or multiple partners than were females while females were more likely than males to report having a single partner.
- White domestic students tended to report having one or more partners than domestic students of Other racial/ethnic backgrounds while international students were more likely than the others to report having no sexual partners.
- Older students were more likely to report having had a sexual partner, but younger students were more likely to report more sexual partners, suggesting older students tend to be involved in committed relationships.
- Off-campus students were more likely than on-campus students to have had at least one sexual partner in the past year (91% of all married students live off campus).
- Those with lower GPAs and those who are members of fraternities or sororities tended to report having more sexual partners than their respective counterparts.
- Gay/lesbian and bisexual students tended to report having more sexual partners than did heterosexual students.

The questionnaire asked respondents to indicate whether or not, within the previous twelve months, they had a sexual partner or partners who were female, male, or transgendered. Among those who reported having any sexual partners and who identified themselves as a 'heterosexual male,' 98.7% reported having only female sexual partners in the past year, but 1.3% reported having both male and female sexual partners in the past year. Of those who identified themselves as 'heterosexual female,' 97.7% reported having only one or more male sexual partners in the past year, but 1.2% also reported having only a female sexual partner and 0.9% reported having both male and female partners in the past year.

Among those who identified themselves as a 'gay male,' 92.3% reported having only male sexual partner(s) in the past year, while 7.7% reported having had a combination of partners. Among those who identified themselves as 'lesbian female,' 55.6% reported having had only a female sexual partner(s) in the past year, while 11.1% reported having had only a male sexual partner, and 33.3% reported having had both male and female partners in the past year.

Among those who identified themselves as a 'bisexual male,' 75.0% reported having had only a female sexual partner and 25.0% reported having had both male and female partners in the past year. Among those who identified themselves as a 'bisexual female,' 65.7% reported having had only a male sexual partner in the past year, 8.6% only female partners, 14.3% had both male and female partners and 11.4% some other combination.

The questionnaire asked respondents to indicate if they had had each oral sex, vaginal intercourse, and anal intercourse in the previous 30 days. They were then asked to indicate how often they or their partner used a condom when they engaged in that type of sexual activity. Table 15 shows the percentage distribution of responses for each of these. The results differ very little from each of the four previous surveys.

The table indicates that:

- More than four out of ten (46.5%) respondents indicated having oral sex at least once in the previous month, while more than a quarter (26.2%) reported never having had oral sex.
 - Nearly as large a percentage of respondents reported having participated in oral sex as reported participating in vaginal intercourse (46.5% vs. 50.6%).
 - Females were more likely than males to report having had oral sex and vaginal sex.
 - Gay/lesbian respondents were more likely than others to report having had oral sex, less likely to have had vaginal sex, and more likely to have had anal sex.
 - Among those who reported participating in oral sex, 93.1% reported never using a condom while only 1.5% reported using a condom all or most of the time – similar to the results of the previous four surveys.

Table 15. Percentage of Respondents Who Report Having Oral, Vaginal, Anal Sex, by Gender, Sexual Orientation and Percentage Using Condoms, in Last 30 Days: 2018

Within the last 30 days, did you have. . .		% of Respondents Who Had		
		Oral Sex	Vaginal Intercourse	Anal Intercourse
OVERALL				
	Never	26.2%	29.5%	77.3%
	Not in Last 30 days	27.3%	19.9%	18.0%
	Yes	46.5%	50.6%	4.6%
Gender		(Percent Yes in past month)		
	Males	44.4% *	44.9% *	5.7%
	Females	48.4%	55.9%	3.7%
Sexual Orientation		(Percent Yes in past month)		
	Heterosexual	46.2% *	52.9% *	3.5% *
	Gay/Lesbian	57.8%	11.4%	39.5%
	Bisexual	55.7%	50.0%	1.6%
	Unsure	11.8%	0.0%	0.0%
If experienced in the last 30 days, how often respondent or partner used a condom during. . .				
	Never Used Condom	93.1%	29.2%	43.6%
	Rarely Used Condom	2.8%	9.8%	4.7%
	Sometimes	2.5%	10.7%	8.2%
	Most of the Time	0.2%	19.1%	11.8%
	Always	1.3%	31.2%	31.7%
		* $p(\chi^2) < .05$		

- Half the respondents (50.6%) reported having had vaginal intercourse at least once in the previous month – up slightly from 45.9% in 2016 but similar to the 49.7% in 2014 and 52.7% in 2012).

- As was the case in the four prior surveys, females were more likely to report having had vaginal intercourse than males.
- One in nine (11.4%) of those who identified themselves as gay or lesbian reported having had vaginal intercourse at least once in the previous month – down appreciably from the 27.3% in 2016.
- Among those who reported having had vaginal sex at least once, 29.2% said neither they nor their partner(s) used a condom, while 50.3% of those who reported having vaginal intercourse reported they or their partner used a condom all or most of the time – down slightly from 52.7% in 2016 and 53.5% in 2014.
- Anal intercourse was much less common than either oral sex or vaginal intercourse. Nearly eight out of ten respondents (77.3%) reported never having had anal intercourse and another 18.0% reported not doing so in the previous month. One in twenty (4.6%) reported having anal intercourse at least once in the previous month – very similar to the 4-5% reported in the four previous surveys.
 - Males and females did not differ significantly regarding having had anal intercourse in the previous month.
 - Gay/lesbian respondents, especially gay males, were much more likely than others to report having had anal intercourse at least once in the previous month.
 - Among those who reported having had anal sex, 43.6% reported they or their partner never used a condom, while 45.5% reported using a condom all or most of the time – up from the 28.4% in 2016 and 30.7% reported in 2014.

For those who were sexually active, the questionnaire included another series of questions regarding the method the respondent and partner used to prevent pregnancy the last time they had vaginal intercourse. Respondents could use several methods simultaneously so multiple responses were possible. Among all respondents, 70.5% reported ever having had vaginal intercourse. Of these, 85.7% reported that they or their partner used birth control to prevent pregnancy the last time they had vaginal intercourse (somewhat higher than the 82.8% reported in 2016, the 81.5% reported in 2014, 77.1% in 2012 and 83.0% reported in 2010), while 1.8% reported not using contraceptives because they were trying to get pregnant. That means – to the best of the respondents' knowledge – 10.2% of the respondents and their partners did not use contraception the last time they had vaginal intercourse but were not intending a pregnancy, while another 2.4% reported not knowing if they used birth control or not.

Table 16 shows the percentage of sexually active respondents who claimed using each of the various methods the last time they had intercourse. The table also compares the reported use of these across respondents of different backgrounds. The table indicates that:

- 60.0% of these respondents claimed to use birth control pills (down slightly from the 61.8% in 2016, 63.0% in 2014, 68.5% in 2012 and 64.7% in 2010), and 37.7% reported relying on withdrawal – up from 36.1% in 2016, 33.5% in 2014, 28.7% reported in 2012, and 31.4% in 2010.
- Females were slightly less likely than males to report using birth control the last time they had vaginal intercourse while males were somewhat more likely to report not knowing.
- Males were somewhat more likely than females to report using a male condom, while – unlike the 2016 and 2014 surveys -- females were less likely than males to report using multiple methods.
- White domestic respondents were more likely than their domestic Other and international student counterparts to report using contraception the last time they had vaginal intercourse.
- White domestic respondents were more likely than Other domestic respondents and especially international respondents to report using birth control pills or withdrawal or multiple methods but domestic respondents were less likely than international students to report using male condoms.
- Generally, respondents 24 or older were less likely than younger respondents to report using contraception and more likely to report trying not to prevent pregnancy; however, respondents 18-19 years old were least likely to report using birth control the last time they had vaginal intercourse.
- Those younger than 24 were more likely than their older counterparts to report relying on birth control pills, male condoms and withdrawal, while older respondents were more likely than younger to report using an IUD or sterilization.
- Those with lower GPAs were not significantly less likely to report using any contraception than those with higher GPAs.
- Members of fraternities or sororities were no more likely than their non-Greek counterparts to report using contraception the last time they had vaginal intercourse, however they were more likely than their non-Greek counterparts to report using birth control pills.

Of those sexually active, 15.2% reported that they or their partner used emergency contraception at least once in the past year – up from the 11.7% reported in 2016 but similar to the 15.5% reported in 2014, 14.9% in 2012 and 15.1% in 2010.

Table 16. Use of Birth Control by Gender, Race, Age, GPA, Member of Fraternity/Sorority: 2018															
	Overall % Yes	% Who Answered Yes													
		GENDER		RACE			AGE				GPA			Member Frat./Sor.	
		Males	Females	White	Other	Internatl	18-19	20-21	22-23	24+	A	B	C/D	Yes	No
Ever had vaginal intercourse: Yes	70.5%	66.1%	74.6% *	75.9%	65.0%	52.7% *	60.6%	66.4%	83.0%	79.4% *	70.2%	70.1%	75.0%	82.4%	69.0% *
Respondent/partner used birth control last time had vaginal intercourse: Yes	85.7%	86.5%	84.8% *	89.1%	74.0%	81.6% *	79.1%	89.8%	91.9%	81.4% *	86.2%	85.3%	83.6%	85.5%	85.7%
No, Not trying to prevent pregnancy	1.8%	1.6%	1.9%	1.7%	1.3%	3.4%	0.0%	0.0%	0.0%	6.8%	2.5%	1.0%	0.0%	2.6%	1.7%
Which method(s) used the last time															
A Birth Control Pills	60.0%	63.1%	57.5%	65.4%	51.8%	33.8% *	61.9%	67.7%	67.6%	41.0% *	58.0%	62.9%	70.6%	76.0%	57.4% *
B Birth Control Shots	2.5%	3.1%	2.0%	1.9%	4.5%	2.9%	1.4%	4.9%	0.0%	1.7% *	1.3%	4.9%	2.0% *	8.1%	1.6% *
C. Birth Control Implants	4.5%	4.7%	4.6%	4.7%	5.4%	1.4%	5.8%	4.6%	3.8%	4.5%	3.3%	5.7%	10.0%	2.0%	4.9%
D. Birth Control Patch	1.1%	1.3%	0.8%	0.9%	1.8%	0.0%	2.2%	1.5%	0.7%	0.0%	0.5%	2.0%	2.0%	1.3%	0.0%
E. Vaginal Ring	2.6%	3.1%	2.0%	1.5%	8.9%	0.0% *	2.2%	2.3%	3.8%	2.9%	1.5%	3.7%	3.9%	1.0%	2.9%
F. Intrauterine Device	13.3%	13.2%	13.5%	15.1%	8.2%	8.5%	5.0%	12.1%	11.9%	23.0% *	12.0%	15.9%	3.9%	9.1%	14.1%
G. Male Condom	63.4%	72.8%	55.6% *	59.7%	69.0%	82.9% *	79.9%	64.0%	62.8%	50.0% *	64.2%	61.8%	68.6%	69.7%	62.4%
H. Female Condom	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
I. Diaphragm/Cervical Cap	0.4%	0.6%	0.3%	0.6%	0.0%	0.0%	0.0%	0.8%	0.0%	0.6%	0.3%	0.8%	0.0%	0.0%	0.5%
J. Contraceptive Sponge	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
K. Spermicide (e.g., foam, jelly, cream)	2.7%	3.8%	1.8%	2.6%	1.8%	5.6%	5.0%	2.7%	1.5%	1.1%	2.8%	3.2%	2.0%	3.0%	2.6%
L. Fertility Awareness (Calendar, Mucous, Basal Temperature)	6.7%	6.2%	7.1%	7.1%	7.1%	2.9%	5.8%	6.0%	10.5%	5.6%	6.3%	7.3%	4.0%	5.0%	7.2%
M. Withdrawal	37.7%	39.8%	36.0%	39.7%	41.1%	16.9% *	40.3%	41.1%	44.4%	25.8% *	37.2%	38.7%	39.2%	32.0%	38.6%
N. Sterilization	1.7%	1.6%	1.8%	2.3%	0.0%	1.4%	0.7%	1.1%	0.0%	5.1% *	2.3%	1.2%	2.0%	2.0%	1.8%
O. Other Method	1.2%	0.9%	1.5%	1.0%	3.6%	0.0% *	0.7%	2.3%	0.0%	1.1%	0.8%	2.5%	0.0%	1.0%	1.3%
Used at least one method	60.2%	86.7%	84.4%	89.1%	73.7%	81.6% *	78.5%	89.5%	91.3%	81.7% *	86.4%	84.9%	82.0%	86.2%	85.5%
Used combined methods	40.3%	62.5%	53.2% *	62.0%	51.3%	35.6% *	57.6%	63.5%	72.5%	38.8% *	56.8%	57.5%	62.9%	62.1%	56.8%
You or partner used emergency contraception last 12 months	15.2%	13.8%	16.3% *	11.3%	21.2%	32.2% *	24.4%	17.2%	10.1%	9.1% *	14.9%	16.5%	14.8% *	24.8%	13.7% *
Unintentionally became pregnant/ got someone else pregnant in last 12	0.5%	1.1%	0.2%	0.3%	2.0%	0.0% *	1.7%	0.3%	0.0%	0.5% *	1.1%	0.0%	0.0% *	0.0%	0.7%
* p(χ ²) < .05															

Additionally, 0.5% of sexually active respondents reported they or their partner became unintentionally pregnant in the previous twelve months – virtually the same as the 0.7% reported in 2016 but down slightly from the 1.2% reported in 2014, the 1.8% in 2012 and the 1.6% reported in 2010.

RESULTS: Fear and Victimization

FEELING SAFE. The questionnaire asked respondents to indicate how safe they feel on campus and in the surrounding community during daytime and nighttime. Figure 13 indicates that students overwhelmingly reported feeling very safe on the MSU campus during the daytime and considerably more so than they do in the surrounding community.

Figure 13 indicates that students reported feeling much less safe on campus during the nighttime than in the daytime, but still more safe on campus than they do in the surrounding community during the nighttime.

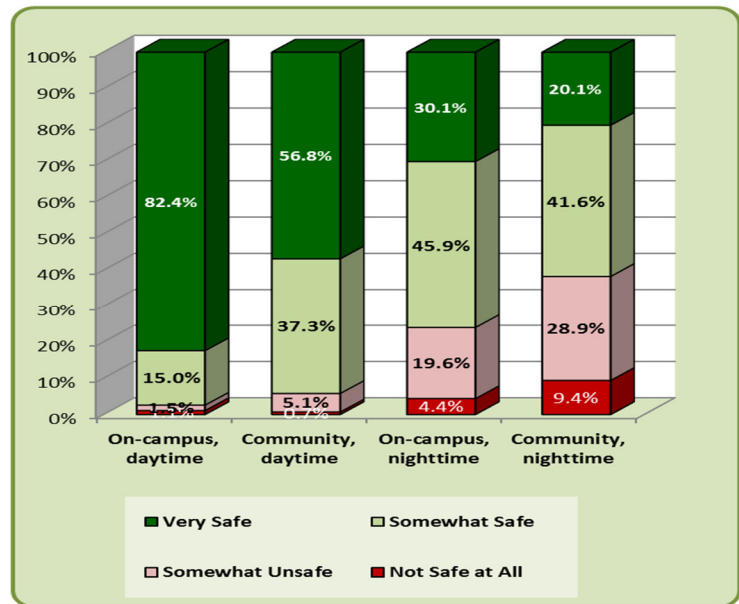


Figure 13. How Safe Students Feel On Campus and Off, Daytime and Nighttime: 2018

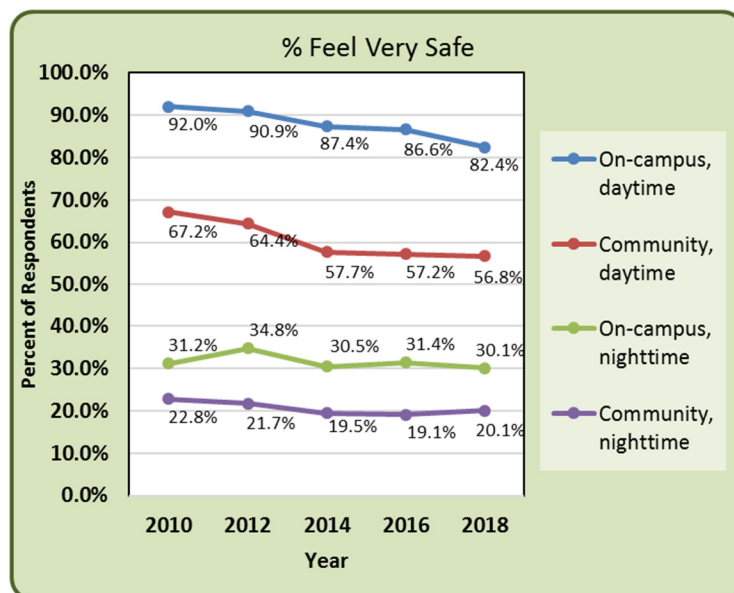


Figure 14. Percentage of Students Who Felt Very Safe On Campus and Off, Daytime and Nighttime: 2010 - 2018

These results are generally similar to the results of the four previous surveys. However, Figure 14 shows that the percentages of respondents who said they felt 'very safe' during the daytime declined for both on campus (10% decline) and off campus (15% decline) since 2010. The percentage of students that reported feeling 'very safe' on campus at nighttime changed little over this time period, while the percentage of students who reported feeling 'very safe' in the surrounding community during the nighttime declined by 12%.

VICTIMIZATION. A section of the questionnaire asked respondents to indicate whether or not they had been involved in or were a victim in each of a variety of potentially harmful or troubling incidents during the last twelve months. As was noted in the four previous reports, prior to 2010, these questions referred to “in the past school year” rather than “the past twelve months.” As a result, other things being equal, the victimization rates would be expected then to be somewhat higher in 2010 or later than in the previous years because of the longer time period referenced. Additionally, the wording to one of the items was modified to make it broader (‘verbally threatened’ rather than ‘verbally threatened for sex’) and a new item was also added.

Table 17 lists the ten different types of situations asked about and shows the percentage of respondents who reported that they had been involved or victimized in that way at least once during the last year. The table also compares the experience of each of these across various categories of respondents.

The table indicates that:

- Roughly one in six students was verbally threatened, one in thirteen was involved in an emotionally abusive relationship, one in fourteen was sexually touched without their consent, one in twenty-six was involved in a physical fight, and one in thirty-six was physically assaulted.
- Overall, 26.0% of the respondents were victimized in at least one of these ten ways over the course of the previous year.
 - Males were more likely than females to have been in a fight and to have been verbally threatened.
 - Females were more likely than males to have been touched sexually without their consent, the victim of attempted sexual penetration and of rape, to have been stalked, or to have been the victim of an emotionally abusive relationship.
 - International students were more likely than domestic students to report having been the victim of attempted sexual penetration without consent or to having been in a physically abusive relationship.
- Those under age 24 were more likely than those 24 or older to have been sexually touched without consent.
- Undergraduate students were nearly twice as likely as graduate/professional students to have been victimized in at least one of these ways, and were much more likely to have been in a fight, physically assaulted, verbally threatened, or sexually touched without consent.
- Members of fraternities or sororities were more likely than their non-Greek counterparts to have been victimized in six of the ten ways and were roughly 1.3 times more likely to have been victimized by at least one of these than were non-members.

**Table 17. Percentage of Respondents Victimized in Various Ways Within the Last 12 Months, by Background: 2018**

Victimization	% Who Answered Yes													
	Overall	GENDER		RACE			AGE				STUDENT STATUS		Member Frat./Soror.	
	% Yes	Male	Female	White	Other	Internatl	18-19	20-21	22-23	24+	Undergrad	Grad/Prof	No	Yes
Were in a physical fight	4.2%	6.0%	2.5% *	4.1%	5.0%	2.9%	5.7%	4.6%	3.8%	1.8%	4.8%	2.4%	3.5%	8.9% *
Were physically assaulted	2.3%	2.7%	1.9%	2.8%	1.7%	0.6%	1.7%	2.9%	4.3%	0.7% *	2.8%	1.0%	2.0%	4.8% *
Verbally threatened	16.0%	19.0%	13.3% *	17.7%	14.7%	9.8% *	18.7%	15.7%	20.1%	11.2% *	18.0%	9.8% *	15.7%	18.5%
Sexually touched without consent	8.4%	3.8%	12.7% *	8.9%	10.9%	2.9% *	13.4%	8.4%	8.1%	3.5% *	9.9%	4.1% *	8.1%	10.9%
Attempted sexual penetration without consent	2.6%	1.0%	4.1% *	2.6%	4.2%	0.0% *	4.3%	2.6%	2.7%	0.4% *	3.2%	0.7% *	2.6%	2.1%
Sexually penetrated without consent	2.1%	1.0%	3.1% *	2.3%	3.0%	0.0%	3.3%	2.4%	1.6%	0.4%	2.8%	0.0% *	2.2%	1.4%
Were victim of stalking	3.5%	1.9%	5.0% *	4.0%	3.3%	1.7%	2.7%	4.4%	3.9%	2.8%	3.4%	4.1%	3.5%	3.4%
In emotionally abusive relationship	7.3%	6.2%	8.5%	6.0%	8.8%	11.0% *	8.7%	7.7%	4.3%	7.4%	7.5%	6.8%	6.7%	11.6% *
In physically abusive relationship	1.9%	2.1%	1.7%	1.6%	3.8%	0.6% *	4.0%	1.1%	1.1%	1.4% *	2.1%	1.4%	2.0%	1.4%
In sexually abusive relationship	1.9%	1.7%	2.0%	2.0%	2.9%	0.6%	3.7%	2.0%	0.5%	0.7% *	2.3%	0.7%	2.0%	1.4%
Any type	28.3%	27.6%	28.9%	29.3%	29.3%	22.4%	33.9%	30.4%	28.3%	19.0% *	31.3%	18.9% *	26.9%	38.8% *

* $p(\chi^2) < .05$ 

Figure 15 shows the trends for each of these over the five surveys from 2010 to 2018. The figure indicates that, prior to 2018, there had been a gradual decline in the percentage of students who report having been victimized, but that there was an increase to 28.3% in 2018.

There were significant declines from 2010 to 2018 for five of these types of victimization: a 53% decline in being in a fight, a 55% decline in physical assault, a 19% decline in being verbally threatened, a 10% decline in being stalked, and a 14% decline in being in an emotionally abusive relationship.

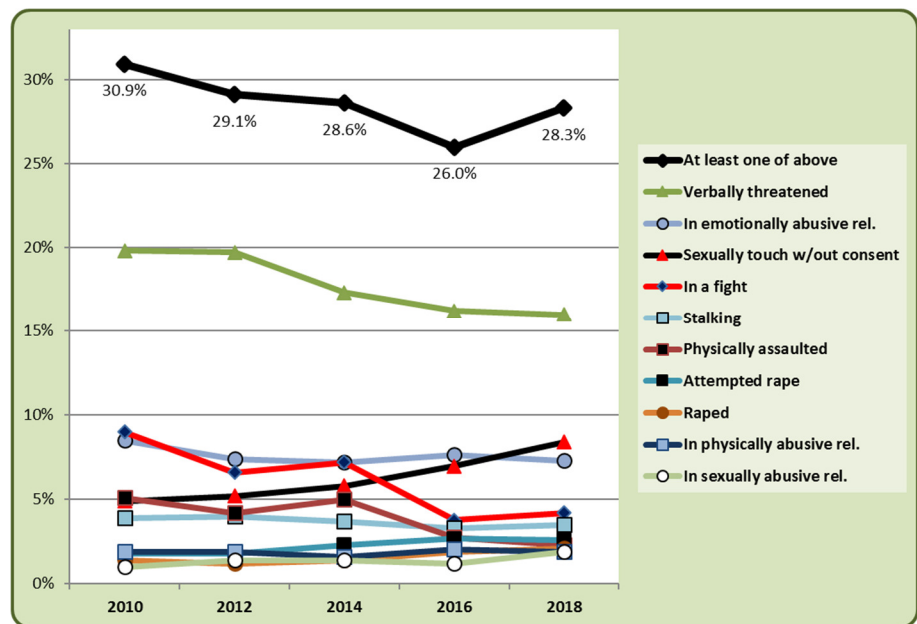


Figure 15. Percentage of Respondents Victimized by Various Acts, At least One: 2010 - 2018

Virtually all of the overall increase in victimization from 2016 to 2018 is the result of increases in reporting of sexual victimization, i.e., being sexually touched without consent, attempted penetration without consent, and sexual penetration without consent. From 2010 to 2018, the percentages of students reporting they experienced these increased substantially: 71% increase in being sexually touched without consent, 44% increase in attempted sexual penetration without consent, 50% increase in sexual penetration without consent, and a 90% increase in being in a sexually abusive relationship. However, during this same ten-year time period, a campus-wide sexual assault education program has been under way. It was initially directed at in-coming freshmen and transfer students each year so that, over time, an increasing proportion of the whole student body would better understand what is and what is not legal consent. Consequently, it is difficult to know if the increased percentages of students reporting these actions since 2010 represent actual increases in prevalence or if it is the understanding as to when consent is required and what constitutes legal consent of these that has increased, resulting in respondents now identifying behaviors as victimization that they might have overlooked otherwise.

Additionally, during the time the survey was being administered in 2018, there was a great deal of reporting nationally about a series of cases of sexual abuse of female patients by an MSU physician during patients' physical exams that may have increased the salience of the consent issues for respondents.

RESULTS: Emotional Well-Being

To measure the experience of depression, stress, anxiety, and other markers of emotional well-being, the questionnaire asked respondents to indicate how recently – if ever – they experienced the various feelings listed. Each of the feelings listed represented varied types and intensities of emotional difficulty – from “felt overwhelmed by all you had to do” to “felt overwhelming anger.”² The last three items in this set of questions represent behavioral or ideational responses to emotional distress.

Table 18 indicates the percentage distribution of responses to each of the different emotional states. That table indicates that:

- Nearly half the respondents indicated they felt overwhelmed by all they had to do and felt exhausted just in the previous two weeks.
- Roughly eight out of ten respondents reported feeling overwhelmed (86.0%) or exhausted (81.9%) at least once in the past year – both very similar to 2016 and 2014.
- Roughly six out of ten respondents reported feeling very sad (67.7% -- up from 62.3% in 2016 and 57.5% in 2014) or very lonely (60.6% -- up from 57.7% in 2016 and 54.1% in 2014) or overwhelming anxiety (59.6% -- up from 57.6% in 2016 and 50.6% in 2014) at least once in the past year.

Table 18. How Recently Respondents Felt Emotionally Troubled in Various Ways: 2018					
Have you ever . . .	% of All Students				
	No, Never	Yes, But Not In Past 12 Mos.	Yes, In Past 12 Mos.	Yes, In Past Month	Yes, In Past 2 Weeks
Felt things were hopeless	32.2%	20.7%	19.4%	8.8%	18.8%
Felt overwhelmed by all you had to do	9.4%	4.6%	17.3%	18.8%	49.9%
Felt exhausted (not from physical activity)	12.7%	5.4%	14.8%	18.2%	48.9%
Felt very lonely	22.1%	17.3%	21.5%	13.8%	25.4%
Felt very sad	18.4%	14.0%	26.6%	13.5%	27.5%
Felt so depressed that it was difficult to function	41.7%	19.4%	18.7%	6.5%	13.7%
Felt overwhelming anxiety	27.9%	12.5%	21.6%	13.5%	24.5%
Felt overwhelming anger	36.4%	22.7%	20.1%	8.1%	12.7%
Intentionally injured self	85.9%	9.0%	2.9%	1.0%	1.2%
Seriously considered attempting suicide	78.6%	12.9%	5.8%	1.2%	1.5%
Attempted suicide	93.0%	5.7%	0.8%	0.3%	0.3%

² The list in the questionnaire used since 2010 included all the items from the previous questionnaire but included four other items as well. Additionally, the response options changed from the number of times the respondent felt or did something to how recently they felt or did something. Whereas the questions in the earlier version of the questionnaire focused on the past school year, the questionnaire used since 2010 was not limited in this way. This prevents any reasonable comparison to the results of surveys prior to 2010.

- Nearly half reported feeling that things were hopeless (47.1% -- virtually the same as in 2016 but up from 40.7% in 2014) at least once in the past year.
- Roughly four out of ten reported feeling overwhelming anger (41.0% -- up from 37.0% in 2016 and 34.3% in 2014) at least once in the past year.
- Nearly four out of ten (38.9%) reported feeling so depressed that it was difficult to function at least once in the past year-- up from 32.7% in 2016 and 27.4% in 2014.

The table also includes the percentages of respondents who, presumably as a consequence of their emotional states, behaved in self-destructive ways. The table indicates that:

- 5.2% of respondents reported intentionally injuring themselves at least once in the past year – up slightly from 3.1% in 2016 and 4.5% in 2014.
- 8.5% of respondents reported seriously considering attempting suicide at least once in the past year – the same as in 2016 but slightly greater than the 6.5% reported in 2014.
- 1.4% of respondents reported attempting suicide at least once in the past year – virtually identical to the 2016 and 2014 results.

Figure 16 shows the stability or the changes in the percentages of students experiencing these emotional challenges over the previous year for the surveys conducted since 2010. The figure illustrates that:

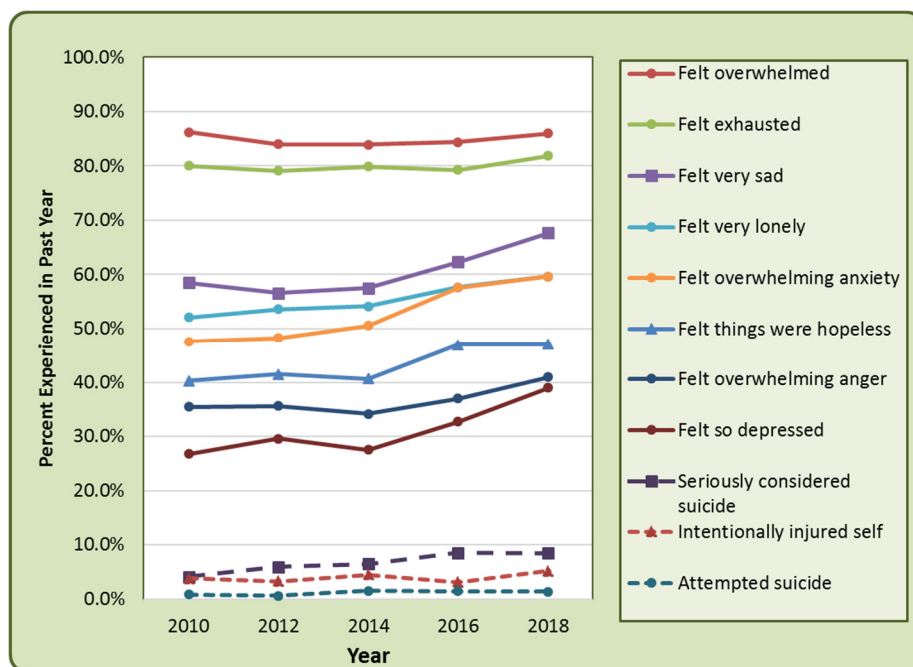


Figure 16. Percentage of Students Experiencing Various Types of Emotional Distress, Engaged in Self Harm/Ideation in Past 12 Months, by Survey Year: 2010 - 2018

- The percentages of students who, during the previous year, felt overwhelmed or felt exhausted but not from physical exertion were relatively constant across the four survey years.
- The percentages of students who reported feeling overwhelming anxiety, or felt things were hopeless, felt very sad, very lonely, felt overwhelming anxiety or so depressed that it was hard to function increased relatively steadily from 2010 to 2018.
 - The percentage of students who reported feeling very lonely or very sad each increased by 16% from 2010 to 2018
 - The percentage who reported feeling things were hopeless increased by roughly 17%
 - The percentage who reported feeling overwhelming anxiety increased by roughly 25%, and
 - The percentage who reported feeling so depressed it was difficult to function increased by 45%

The first eight items listed in Table 18 are experiences of intense emotions. The last three items listed in Table 18 are possible problematic responses to such intense emotions. By themselves each of the strong emotional experiences could, at least temporarily, impede the student's academic, social or physical well-being. The effect of experiencing several of these intense emotions can be appreciably more consequential. As in previous years' reports, we have examined the relationship between the number of the different emotional problems the student experienced and the likelihood of having intentionally injured one's self, seriously considered suicide, or attempted suicide.

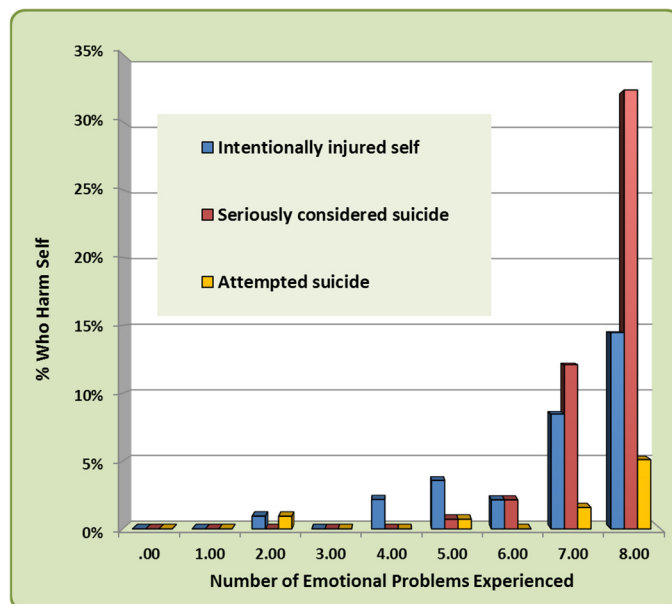


Figure 17. Percentage of Students Engaging in Self-Harm by Number Emotional Problems Experienced: 2018

Figure 17 shows the percentages of respondents experiencing various numbers of emotional problems who intentionally injured themselves, considered suicide or attempted suicide in the past year. The figure clearly indicates that the likelihood of a student engaging in one of the three types of self-harms or self-harm ideation increases substantially the more different emotional problems the student experiences. The risk is relatively low if the student experiences four or fewer emotional problems, increases substantially if the student experiences seven and increases dramatically if the student experiences all eight.

To explore the experience of such emotional difficulties within the student population, we have counted the number of the eight different emotional

experiences respondents reported having in the past twelve months. The index could vary from 0 to 8.

Only one in twelve respondents (8.7%) reported experiencing none of these emotional states in the past year and more than a third (34.7%) reported experiencing seven or eight of the different emotional states - up from 31.9% in 2016 and 25.5% in 2014. The overall average number of the emotional problems experienced was 4.8 with a standard deviation of 2.6 - up from the average of 4.57 in 2016, 4.26 in 2012, 4.27 in 2010, and 4.25 in 2010. That is, it appears that more students are experiencing more of the emotional difficulties.

Not surprisingly, Figure 16 indicates that there has been a concomitant increase from 2010 to 2018 in the percentage of students who reported seriously considering suicide - an increase of 106% since 2010. Figure 16 indicates that there has been a slight increase in the percentage who reported having attempted suicide from 0.8% in 2010 to 1.4% in 2018 - a 73% increase. Figure 16 also indicates that there has been a slight increase in the percentage of students who reported having intentionally injured themselves - a 36% increase from 4.1% in 2010 to 5.2% in 2018. Although the percentages are small, it is useful to remember that 1% difference in the prevalence of an action among MSU's student body represents a difference of roughly 480 students.

Table 19 compares the average number of emotional difficulties experienced in the past year across demographic groups. Table 19 indicates that:

- On average, females experienced more of the different emotional problems than males, domestic students more than international students, and those with lower GPA's more than those with higher.
- Sexual minorities experienced more of the different emotional problems than heterosexuals.
- Married/partnered students experienced fewer of the emotional problems than single students, while separated/divorced students experienced more.
- The table indicates there were no significant differences in the averages based on residence on campus vs. off, Greek membership, age group, or academic status.

Table 19 also compares the average number of emotional problems experienced across individuals based on their experience of various types of victimization as well. The table indicates that:

- Those who had been verbally threatened, touched sexually without their consent, stalked, the victim of attempted rape, and those who had been in an emotionally or physically or sexually abusive relationship in the past year reported experiencing, on average, a greater number of the different emotional problems in the past year than those who had not been victimized in these ways.

Table 19. Mean Number of Emotional Problems Experienced in the Past 12 Months, by Background and Victimization Experience: 2018

Characteristic		Mean	sd	F	p(F)
Overall	min=0, max=8	4.81	2.59		
Gender	Males	4.34	2.70	38.54	.000
	Females	5.25	2.40		
Race	White	4.84	2.54	5.09	.006
	Other	5.10	2.57		
	International	4.29	2.75		
Age	18-19	4.86	2.68	.58	.626
	20-21	4.84	2.53		
	22-23	4.94	2.51		
	24 or older	4.65	2.64		
Residence	On campus	4.78	2.63	.08	.780
	Off campus	4.83	2.57		
Student Status	Undergrad	4.89	2.56	3.22	.073
	Grad/Prof	4.58	2.66		
GPA	A	4.67	2.56	10.11	.000
	B	4.85	2.65		
	C or less	6.00	2.18		
Member of Fraternity or Sorority	YES	4.54	2.62	1.86	.173
	NO	4.85	2.28		
International Student	YES	4.30	2.74	7.95	.005
	NO	4.90	2.55		
Marital Status	Single	4.86	2.57	2.89	.034
	Married/Partnered	4.16	2.74		
	Separated/Divorce	5.02	3.11		
	Other	5.91	1.84		
Sexual Orientation	Heterosexual	4.69	2.60	9.43	.000
	Gay/Lesbian	5.83	2.10		
	Bisexual	6.05	2.23		
	Unsure	6.17	1.73		

Table 19. (continued)

Characteristic		Mean	sd	F	p(F)
Involved in physical fight In past 12 months	NO	4.80	2.59	.25	.617
	YES	4.99	2.53		
Physically assaulted in Past 12 months	NO	4.79	2.58	3.76	.053
	YES	5.74	2.62		
Verbally threatened in Past 12 months	NO	4.70	2.61	10.96	.001
	YES	5.37	2.39		
Sexually touched without Consent in Past 12 months	NO	4.73	2.59	14.99	.000
	YES	5.76	2.37		
Victim of stalking in past 12 months	NO	4.77	2.59	7.73	.006
	YES	5.89	2.20		
Victim of Attempted rape In Past 12 months	NO	4.79	2.59	4.01	.046
	YES	5.74	2.46		
Raped in past 12 months	NO	4.80	2.59	.77	.380
	YES	5.25	2.46		
In emotionally abusive relationship	NO	4.71	2.58	28.93	.000
	YES	6.23	2.13		
In physically abusive relationship	NO	4.80	2.59	4.38	.037
	YES	5.94	2.25		
In sexually abusive relationship	NO	4.79	2.58	6.81	.009
	YES	6.19	2.38		
* p(F)< .05					

RESULTS: Mental Health

The questionnaire also asked respondents to indicate whether or not they had been diagnosed or treated by a professional in the previous twelve months for any of 15 different mental health conditions. The questionnaire allowed respondents to indicate if they had not been diagnosed, they had been diagnosed but not treated, they had been diagnosed and treated with medication, with psychotherapy, with medication and psychotherapy, or with some other treatment. For summary purposes, we focus on whether or not respondents have been diagnosed with the condition and, of those who report having been diagnosed, whether or not they have been treated in at least one of the ways listed.

Table 20. Percentage of Respondents Who Were Diagnosed, Treated for Various Mental/Emotional Health Problems in the Past 12 Months, by Background: 2018

Health Problem	% Diagnosed	% of Diagnosed Treated	% Diagnosed In Past 12 Months									
			GENDER		RACE			STUDENT STATUS		RESIDENCE		
			Male	Female	White	Other	Internatl	Undergrad	Grad/Prof	On	Off	
Anorexia	0.6%	57.6%	0.3%	0.9%	0.6%	1.3%	0.0%	0.8%	0.0%	0.7%	0.5%	
Anxiety Disorder	18.1%	72.8%	11.6%	24.1% *	21.1%	18.1%	4.1% *	18.2%	17.9%	14.7%	19.9% *	
ADHD	6.9%	83.4%	7.8%	6.0%	8.1%	7.6%	0.6% *	7.8%	4.1% *	5.8%	7.5%	
Bipolar disorder	0.8%	100.0%	1.0%	0.6%	1.0%	0.8%	0.0%	1.0%	0.3%	0.5%	1.0%	
Bulimia	0.5%	43.2%	0.2%	0.6%	0.7%	0.0%	0.0%	0.5%	0.3%	0.5%	0.4%	
Depression	14.1%	75.5%	8.5%	19.2% *	16.4%	14.3%	3.0% *	13.9%	15.1%	11.4%	15.7% *	
Insomnia	3.8%	58.3%	2.6%	4.9% *	3.8%	5.5%	1.2%	3.9%	3.4%	2.7%	4.5%	
Other sleep disorder	2.0%	76.6%	1.7%	2.2%	1.7%	3.0%	1.7%	2.1%	2.1%	1.7%	2.1%	
Obsessive Compulsive Disorder (OCD)	3.1%	58.4%	2.9%	3.3%	3.3%	3.4%	1.2%	3.5%	2.0%	1.9%	3.6%	
Panic attacks	6.8%	62.1%	2.3%	10.9% *	7.7%	8.1%	0.6% *	7.1%	5.8%	5.3%	7.5%	
Phobia	0.5%	75.9%	0.0%	0.9% *	0.6%	0.4%	0.0%	0.7%	0.0%	0.2%	0.6%	
Schizophrenia	0.1%	100.0%	0.3%	0.0%	0.0%	0.9%	0.0% *	0.2%	0.0%	0.0%	0.3%	
Substance abuse problem	0.4%	87.1%	0.3%	0.5%	0.2%	1.3%	0.0%	0.3%	1.0%	0.0%	0.6%	
Other addiction	0.3%	0.0%	0.7%	0.0% *	0.2%	0.8%	0.0%	0.4%	0.0%	2.5%	2.4%	
Other mental health condition	2.5%	67.4%	2.6%	3.4%	2.6%	3.4%	0.6%	1.9%	3.0%	1.9%	2.7%	
* p(χ2) < .05												

* $p(\chi^2) < .05$

Table 20 shows the results and also compares the percentage diagnosed across selected demographic groups. The table indicates that less than nineteen percent of the respondents had been diagnosed in the past year with any one of the conditions. The condition most commonly diagnosed was anxiety disorder (18.1%) of all respondents – up from 13.2% in 2016, 10.7% in 2014, 9.8% in 2012 and the 7.5% reported in 2010. That is, the percentage of students diagnosed with anxiety disorder has more than doubled since 2010.

The second most commonly diagnosed mental health issue was depression (14.1%) -- also up, from 11.9% in 2016, 8.5% in 2014, 8.8% in 2012, and 6.3% reported in 2010. That is, the percentage of students diagnosed with this mental health problem has also more than doubled since 2010.

Among all respondents, 75.1% indicated that they had not been diagnosed with any of these conditions – down from the 77.3% with no such diagnosis in 2016, 82.0% in 2014, 82.1% in 2012 and 84.5% in 2010.

In 2018, 8.2% reported having been diagnosed with one of these problems – similar to the 9.9% found in 2016 and 7.2% in 2014 and 2012. Among those diagnosed with any, the average number they reported was 2.4 – the same as in 2016, 2014 and 2012.

The table also shows the percentage who were or are being treated among those diagnosed with a mental health condition in the past year. The majority of those diagnosed, with the exception of bulimia, also reported they had received some type of treatment.

Table 20 compares the percentages of students diagnosed in the past year based on gender, race, campus residence and student status. That table indicates that:

- Females were more likely than males to have been diagnosed with anxiety disorder, depression, insomnia, and panic attacks.
- White domestic respondents were more likely than Other domestic students or international students to report having been diagnosed with anxiety disorder, ADHD, depression, panic attacks, and some type of phobia.
- Undergraduates and graduate/professional students differed significantly on only one of the diagnoses, ADHD, with undergrads more likely to report having been diagnosed.
- Students living off campus were somewhat more likely to report having been diagnosed with anxiety disorder and depression.

The questionnaire asked respondents to indicate if they had ever been diagnosed with depression. One in five students (20.8%) reported that they had – up slightly from 18.4% in 2016, the 17.1% reported in 2014, 15.7% in 2012 and the 14.1% reported in 2010. Of those who said they have ever been diagnosed, 64.3% reported they had been diagnosed or treated in the past year – up from 58.3% in 2016, 44.9% in 2014, 51.9% in 2012 and 41.8% reported in 2010. That is, since 2010, an increasing percentage of students reported having been diagnosed with or treated for depression in the previous year, likely while they have been a student at MSU.

DIFFICULT/TRAUMATIC EVENTS. The questionnaire asked respondents if any of twelve issues had been very difficult or traumatic for them in the past twelve months. Table 21 shows the percentages of students overall who reported great difficulty or trauma related to each of the issues. The table indicates that:

- More than four out of ten students (47.1%) reported that academic issues were very difficult or traumatic for them in the past year – about the same percentage as in 2016 (45.9%) and 2014 (45.0%) but up slightly from the 42.6% in 2012 and 42.8% in 2010.
- Nearly three out of ten students (27.9%) reported trauma or great difficulty with intimate relationships in the past year – similar to the 29.7% found in 2016, the 28.5% reported in 2014, 27.1% in 2012, and 29.3% in 2010.

Table 21. Percentage of Respondents for Whom Various Issues Were Traumatic or Very Difficult in the Past 12 Months, by Background: 2018

Issue	% For Whom Very Difficult, Traumatic	% Had Difficulty, Trauma In Past 12 Months											
		GENDER		RACE			RESIDENCE		YEAR/LEVEL IN SCHOOL				
		Male	Female	White	Other	Internatl.	On	Off	First	Second	Third	Fourth/ Fifth	Grad/Prof
Academics	47.1%	41.0%	52.6% *	46.0%	52.3%	44.2%	46.1%	47.5%	43.7%	48.5%	49.6%	52.7%	40.4%
Career-related issue	29.9%	27.5%	31.9%	27.1%	32.5%	39.5% *	19.8%	35.0% *	15.8%	19.9%	30.7%	40.3%	34.1% *
Death of a family member or friend	13.3%	11.7%	14.8%	12.7%	16.9%	11.0%	12.5%	13.7%	12.1%	18.7%	15.0%	9.1%	12.8%
Family problems	22.2%	14.7%	28.9% *	19.9%	33.3%	17.4% *	20.7%	22.9%	23.6%	24.1%	20.3%	21.5%	22.2%
Intimate relationships	27.9%	26.5%	29.1%	27.0%	28.9%	30.1%	24.6%	29.5%	26.9%	26.1%	25.5%	31.5%	27.9%
Other social relationships	21.7%	18.0%	25.0% *	20.8%	27.0%	18.6%	20.2%	22.4%	19.7%	22.7%	20.7%	27.6%	16.8%
Finances	29.2%	24.0%	33.9% *	28.2%	39.4%	19.7% *	23.3%	32.2% *	20.3%	26.1%	29.5%	37.6%	28.0% *
Health problems of a family member or partner	17.6%	13.3%	21.5% *	15.7%	26.7%	13.4% *	14.7%	19.0%	14.2%	18.8%	15.4%	17.2%	20.6%
Personal appearance	22.5%	16.2%	28.3% *	22.9%	30.4%	9.0% *	22.6%	22.4%	26.2%	26.1%	22.8%	24.2%	15.9%
Personal health issue	19.4%	17.6%	21.1%	18.4%	25.0%	16.4% *	16.7%	20.8% *	18.0%	20.3%	21.3%	21.1%	16.6%
Sleep difficulties	26.7%	25.0%	28.3%	26.3%	36.3%	15.1% *	27.5%	26.3%	26.8%	31.5%	25.4%	26.2%	24.9%
Other	6.2%	4.5%	7.8% *	5.7%	10.0%	3.5% *	5.6%	6.5%	7.7%	4.5%	6.3%	7.1%	5.8%
* $p(\chi^2) < .05$													

- Roughly three out of ten students (29.2%) reported great difficulty or trauma associated with their finances – up slightly from 2016 (27.9%) but similar to results in 2014 (31.1%) and 2012 (30.8%).
- Three out of ten reported difficulty or trauma with career-related issues (29.9%) – inching upward from the 27.8% in 2016, 26.9% in 2014, and 25.0% in 2012 but not much greater than the 28.3% in 2010.
- Roughly a quarter (26.7%) reported difficulty or trauma because of sleep problems, which continues to creep up from 24.9% in 2016, 23.5% in 2014, 21.9% in 2012, and 21.8% in 2010.
- More than one in five reported difficulty or trauma because of
 - Family problems (22.2% vs. 21.2% in 2016, 21.8% in 2014, 23.5% in 2012, and 20.6% in 2010),
 - Problems with other social relationships (21.7% vs. 23.3% in 2016, 22.8% in 2014, 23.6% in 2012, and 21.2% in 2010), and
 - With a personal appearance issues (22.5% vs. 21.3% in 2016, 20.9% in 2014, 18.5% in 2012, and 16.7% in 2010).
- Between one in six and one in nine reported difficulty or trauma because of
 - A personal health issue (19.4% vs. 17.8% in 2016, 14.8% in 2014, 14.2% in 2012, and 14.4% in 2010),
 - The health problems of a family member or partner (17.6% vs. 16.4% in 2016, 14.9% in 2014, 17.4% in 2012, and 15.2% in 2010), and
 - The death of a family member or friend (13.3% vs. 13.0% in 2016, 15.1% in 2014, 12.9% in 2012, and 13.8% in 2010).

What is particularly outstanding about these results is the remarkable stability of the prevalence rates. It appears that year in and year out, roughly the same percentage of MSU students will experience trauma or great difficulty with these various issues. The University provides programs, centers and professional staff to assist students in coping with many of these types of problems – academic counselors and help centers, psychological counseling services, the student health center, etc. The University also attempts to make the availability of these assistive resources known to the students in numerous ways. What isn't known from these data is how many of the students struggling to cope with particular problems knew of the resources that are available, sought assistance, were able to see someone with the skills to help, and received the assistance needed. Are the various resource centers staffed to handle the volume of students needing assistance if all or most of those who need help actually sought help? Are students not seeking assistance they need because they are unaware of what is available, because they underestimate the normative climate for help-seeking among their peers, or because the centers are understaffed and there are long delays in getting appointments?

While we cannot answer these questions with the NCHA data, we can identify which types of students are more or less likely to experience which kinds of trauma or difficulty. Table 21 compares the prevalence

rates of the various issues by gender, race, residency, and year in college.

The table indicates that:

- Females were more likely than males to report experiencing great difficulty or trauma with academics, family problems, other social relationships, finances, health problems of a family member or partner, and personal appearance.
- Domestic students were more likely than international students to report experiencing great difficulty or trauma with finances, personal appearance, and sleep difficulties, while domestic students other than White were more likely to report great difficulty or trauma with family problems, health problems of a family member or partner and a personal health issue.
- Off campus residents were more likely than on campus residents to report experiencing great difficulty or trauma with career-related issues, finances, and a personal health issue.
- There were significant differences in the prevalence of experiencing great difficulty or trauma across academic classes regarding academics, career-related issues, finances, and personal health issues.
 - Third, fourth and fifth year undergraduate students were more likely to report difficulties with career-related issues.
 - Fourth and fifth year undergraduate students were more likely than others to report great difficulty or trauma regarding finances.

Although Table 21 does not include the breakdowns, there was a clear relationship between experiencing difficulty or trauma and the respondents' GPAs. There were statistically significant differences across GPA categories on seven of the twelve issues. In each case, those with an "A" GPA were less likely to report experiencing difficulty or trauma than those with a "B" GPA, and those with a "C/D/F" GPA were in almost all cases more likely to report experiencing difficulty or trauma than those with a "B" GPA. There was no significant difference across GPA categories in the percentages of respondents who reported difficulty or trauma because of career issues, the death of a family member, intimate relationships, or health problem of a family member or partner, but there were significant differences on the others.

STRESS. Respondents were asked to rate the overall level of stress they experienced over the previous twelve months. Figure 18 shows the percentage distribution of responses for 2018, 2016, 2014, 2012 and 2010. The figure indicates the distributions have been very similar across the five surveys. It also indicates that more than half the respondents (53.6%) in 2018 rated their stress levels over the past

year as greater than average (i.e., tremendous or more than average) which was very similar to but slightly greater than the 52.3% in 2016, 50.7% in 2014, 48.6% in 2012 and the 47.5% reported in 2010.

The increase in the percentage of students who reported experiencing tremendous or more than average stress is more easily seen in Figure 19. From 2010 to 2018, there has been a 13% increase in the percentage of students reporting above average levels of stress.



Figure 19. Respondents' Ratings of Overall Level of Stress Experienced in Past 12 Months: 2018 vs. 2016 vs. 2014 vs. 2012 vs. 2010

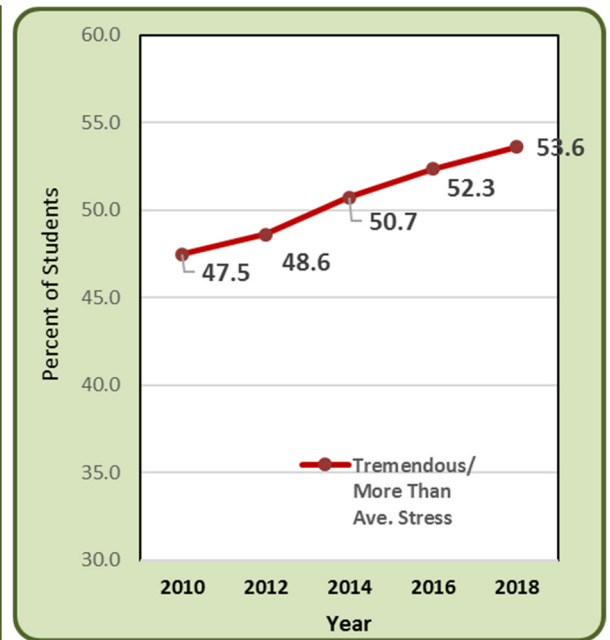


Figure 18. Percentage of Respondents Reporting Stress Being Tremendous or More Than Average in Past Year, 2010 - 2018

MENTAL HEALTH SERVICES. The questionnaire asked respondents whether or not they had ever received psychological or mental health services from a counselor, therapist or psychologist, from a psychiatrist, from some other medical provider, or from a minister, priest, rabbi, or other clergy. Considering the numbers of respondents who reported experiencing a wide variety of emotional, psychological, and traumatic difficulties, relatively few students reported ever receiving psychological or mental health services. Similar to the results from 2016, roughly a third (34.4%) reported receiving services from a counselor, therapist or psychologist, 13.5% from some other medical provider, 12.8% from a psychiatrist, and 3.0% from clergy. This, however, over-estimates the proportion of students who have received mental health services since many of those who received services from one type of provider also received services from another type of provider. Altogether, 37.9% of the respondents claimed to have ever received psychological or mental health services from some professional – virtually the same as in 2016 and only slightly higher than the 36.2% reported in 2014, the 33.4% reported in 2012 and the 30.7% reported in 2010 – while 62.1% reported they never have.

The question asked if the respondent had ever received psychological or mental health services so we do not know if those services occurred in the past year. However, similar to the findings of 2016 and 2014, the majority of those who said they had been victimized in the past year said they had received such counseling services at some point in the past – physically or sexually assaulted, 67.9% (up from 60.7% in 2016), attempted rape, 71.0% (similar to the 73.1% in 2016, which was up from 61.9% in 2014); raped, 65.4% (down from 78.9% in 2016 and 73.3% in 2014); in emotionally abusive relationship, 59.1% (virtually the same as the 59.7% reported in 2016 which was up slightly from 55.6% in 2014); in a physically abusive relationship, 56.5% (down from 75.0% in 2016); in a sexually abusive relationship, 65.2% (virtually the same as the 66.7% in 2016, which was up from 55.6% in 2014).

Similarly, between four out of ten and six out of ten students who experienced great difficulty or trauma from various circumstances in the past year also reported having received such psychological or mental health services –

- career-related issues, 44.1% (vs. 50.7% in 2016 and 47.2% in 2014);
- academic problems 46.3% (vs. 46.2% in 2016 and 44.6% in 2014);
- financial concerns, 49.7% (vs. 50.7% in 2016 and 46.7% in 2014);
- problems with intimate relationships, 48.2% (vs. 51.4% in 2016 and 48.9% in 2014);
- problems with other relationships, 54.2% (vs. 51.1% in 2016 and 53.1% in 2014);
- personal appearance issues, 49.4% (vs. 55.2% in 2016 and 52.0% in 2014);
- health problem of a family member, 46.2% (vs. 55.9% in 2016 and 52.2% in 2014);
- death of a family member, 41.0% (vs. 45.8% in 2016 and 41.3% in 2014);

- sleep difficulties, 50.0% (vs. 50.6% in 2016 and 52.7% in 2014);
- family problems, 48.5% (vs. 51.4% in 2016 and 53.8% in 2014); or
- a personal health issue, 56.4% (vs. 60.9% in 2016 and 58.3% in 2014).

On problems that are more emotionally or psychologically internal to the individual, the respondents were less likely to report having ever received services, except when the crisis was more acute. The percentage of those who experienced various emotional problems who reported ever receiving services was:

- overwhelmed by what had to be done, 40.8% (vs. 40.1% in 2016 and 39.2% in 2014);
- felt exhausted, 41.5% (vs. 40.6% in 2016 and 39.3% in 2014);
- felt very lonely, 44.9% (vs. 42.6% in 2016 and 42.1% in 2014);
- felt very sad, 43.1% (vs. 42.7% in 2016 and 42.4% in 2014);
- felt overwhelming anger, 46.7% (vs. 46.0% in 2016 and 45.5% in 2014);
- felt hopeless, 48.1% (vs. 45.5% in 2016 and 46.3% in 2014);
- felt overwhelming anxiety, 47.4% (vs. 45.2% in 2016 and 44.8% in 2014);
- felt too depressed to function, 51.2% (vs. 49.8% in 2016 and 48.9% in 2014);
- intentionally tried to injure self, 63.0% (down from 68.9% in 2016 which was up from 56.2% in 2014);
- seriously considered suicide, 68.2% (similar to the 66.7% reported in 2016, which was up from 57.3% in 2014); or
- attempted suicide, 76.2% (up from 73.1% in 2016 which was also up from 55.8% in 2014).

Notably, the percentage of respondents who reported having ever received psychological or mental health services was much greater among those who engaged in self-harm activities or who were considering serious self-harm. Importantly, there were substantial increases in the percentages of those engaging in or considering self-harm who reported having ever received psychological or mental health services from 2014 to 2018. One would hope that the services received were in response to the mental health issues the students faced rather than being an indication that the University is enrolling an increasingly vulnerable population that must then try to cope with the challenges of campus life and the academic demands of a university.

Also, the percentage of students who reported having ever received psychological or mental health services increased with the level of stress the respondents reported experiencing in the past year. Among those who reported no stress, 8.7% said they had received such services; 13.6% among those who reported less than average stress; 30.1% among those who reported average stress; 44.7% among those who reported greater than average stress; and 65.5% reported receiving such services among those who reported tremendous amount of stress in the past year – the latter being very similar to the 68.2% reported in 2016 and the 69.7% reported in 2014 and notably higher than the 54.1% that was reported in 2012.

The questionnaire asked respondents whether or not they had ever received psychological or mental health services from their current college/university's counseling or health services. About one in six (18.2%) of the students indicated that they had received psychological or mental health services from MSU's Counseling Center or Olin Student Health Center. This is similar to but slightly greater than the 15.4% reported in 2016, 13.0% in 2014, which was slightly greater than the 11.1% reported in 2012 and greater than the 9.9% reported in 2010. That is, since 2010, there has been roughly a 100% increase in the percentage of students who report having received psychological or mental health services from MSU's counseling or health services.

Respondents were also asked whether or not they would consider seeking help from a mental health professional in the future if they were having a personal problem that was really bothering them. Among all respondents, eight out of ten (81.7%) said that they would consider seeking help. This was somewhat greater than the 77.8% reported in 2016, which was greater than the 70.6% in 2014, which in turn was greater than the 67.2% reported in 2012 which was the same as was reported in 2010. That is, there has been a noteworthy increase – a 22% increase -- in students' professed willingness to seek mental health assistance in the past seven years.

Among those who reported that they had never received psychological or mental health services from a professional in the past, 74.6% said they would consider doing so in the future if they had a problem that was really bothering them, but 93.3% of those who have received such services from a professional in the past indicated they would consider doing so again in the future. Both of these are slightly greater than had been reported in 2016 (70.9% and 89.2% respectively), which were also greater than had been reported in 2014 and in 2012 and 2010.

RESULTS: Physical Health in the Past Year

Respondents were asked to report whether or not they had been diagnosed or treated by a professional for any of 26 different health problems within the previous twelve months. Table 22 shows the percentages of all respondents who reported having been diagnosed or treated with each of the problems during the past year. The results are very similar to those reported for 2016, 2014, 2012 and 2010. The table indicates that:

- Roughly one in six reported having been diagnosed with or treated for allergy problems (16.5%) and 13.7% for a sinus infection; one in eleven (9.2%) reported having been diagnosed with or treated for strep throat; roughly one in ten reported having been diagnosed with or treated for back pain (9.7%), one in eleven (8.9%) for a urinary tract infection, and one in fifteen for asthma (6.8%), one in nineteen for bronchitis (5.4%), or a broken bone or sprain (5.4%).
- Half of the respondents (51.6%) reported having been diagnosed with or treated for at least one of the 26 health problems in the previous year. This is very similar to the 50.1% reported in 2016, the 48.7% reported in 2014, and the 54.4% reported in each 2012 and 2010.
 - Females were more likely than males (57.0% vs. 45.5%) to report having been diagnosed with or treated for at least one of the health problems.
 - Domestic White and Other respondents were more likely than international respondents to report having been diagnosed with or treated for at least one of the health problems (53.7% vs. 50.8% and 42.5% respectively).
 - There were no significant differences between undergraduates and graduate/professional students or between those living on campus and those living off campus regarding having been diagnosed or treated for at least one of these health problems.
- Females were more likely than males to report having been diagnosed with or treated for allergy problems, asthma, ear infection, endometriosis, migraine headaches, sinus infections, and urinary tract infections. Males were more likely to report having been diagnosed with or treated for gonorrhea and high blood pressure.
- Domestic respondents were more likely than international students to report having been diagnosed with or treated for allergy problems, asthma, Chlamydia, and sinus infections. White domestic students were more likely than other students to report having been diagnosed or treated for migraine headaches. Domestic Other students were less likely than the others to report having been diagnosed or treated for strep throat in the past year.
- Those living off campus were more likely than on campus students to report having been diagnosed or treated for a urinary tract infection.

Table 22. Percentage of Respondents Who Were Diagnosed or Treated for Various Physical Health Problems in the Past 12 Months, by Background: 2018										
Health Problem	Overall % Diagnosed or Treated	% Diagnosed or Treated During Past 12 Months								
		GENDER		RACE			STUDENT STATUS		RESIDENCE	
		Male	Female	White	Other	Internatl	Undergrad	Grad/Prof	On	Off
Allergy Problems	16.5%	14.2%	18.6% *	17.3%	19.8%	8.7% *	16.5%	16.4%	16.1%	16.8%
Asthma	6.8%	3.8%	9.7% *	6.7%	9.9%	2.9% *	6.8%	6.8%	5.1%	7.7%
Back pain	9.7%	8.3%	11.0%	9.3%	9.8%	11.6%	8.3%	13.9% *	11.6%	8.6%
Broken bone/fracture/sprain	5.4%	6.0%	4.9%	6.0%	4.3%	4.6%	5.5%	5.1%	5.1%	5.6%
Bronchitis	5.4%	4.1%	6.6%	5.0%	5.6%	7.1%	6.0%	3.8%	4.1%	6.0%
Chlamydia	2.4%	2.6%	2.4%	2.0%	5.5%	0.6% *	2.9%	0.7% *	3.1%	2.1%
Diabetes	0.4%	0.3%	0.5%	0.4%	0.0%	1.2%	0.1%	1.4% *	0.2%	0.5%
Ear infection	4.2%	2.6%	5.7% *	5.1%	3.8%	1.2%	4.5%	3.4%	4.1%	4.4%
Endometriosis	1.0%	0.4%	1.6% *	1.2%	0.4%	0.6%	0.6%	2.0% *	0.5%	1.3%
Genital herpes	0.8%	0.5%	1.1%	1.0%	0.9%	0.0%	0.9%	0.7%	0.5%	1.0%
Genital warts/HPV	0.7%	0.3%	0.9%	0.6%	0.9%	1.2%	0.8%	0.7%	0.2%	1.0%
Gonorrhea	0.6%	1.0%	0.2% *	0.6%	0.4%	0.6%	0.5%	0.7%	0.5%	0.6%
Hepatitis B or C	0.3%	0.5%	0.0%	0.2%	0.0%	0.6%	0.1%	0.7%	0.0%	0.4%
High blood pressure	2.1%	3.0%	1.3% *	1.6%	3.8%	1.8%	1.4%	4.1% *	1.7%	2.4%
High cholesterol	2.2%	1.7%	2.7%	1.7%	3.8%	2.4%	1.5%	4.1% *	2.0%	2.4%
HIV infection	0.2%	0.3%	0.0%	0.1%	0.0%	0.6%	0.1%	0.3%	0.0%	0.2%
Irritable bowel syndrome	3.3%	2.6%	4.0%	3.7%	3.4%	1.2%	3.1%	3.8%	2.0%	4.0%
Migraine headache	5.1%	2.1%	7.9% *	6.5%	2.5%	2.4% *	4.6%	6.5%	4.9%	5.2%
Mononucleosis	1.5%	1.5%	1.4%	1.7%	0.0%	2.4%	1.5%	1.7%	2.2%	1.1%
Pelvic inflammatory disease	0.4%	0.3%	0.3%	0.1%	0.8%	1.2%	0.3%	0.7%	0.0%	0.5%
Repetitive stress injury	1.0%	1.2%	1.0%	0.7%	1.7%	1.2%	1.1%	1.0%	0.5%	1.4%
Sinus infection	13.7%	8.6%	18.4% *	16.7%	10.2%	4.7% *	14.9%	10.2% *	11.2%	15.0%
Strep throat	9.2%	7.8%	10.6%	10.9%	4.3%	8.2% *	10.8%	4.1% *	11.2%	8.2%
Tuberculosis	0.2%	0.2%	0.2%	0.1%	0.4%	0.6%	0.1%	0.3%	0.0%	0.2%
Urinary tract infection	8.9%	0.7%	16.3% *	9.6%	8.1%	6.5%	8.9%	8.5%	6.3%	10.2% *
At least one of the above	51.6%	45.5%	57.0% *	53.7%	50.8%	42.5% *	51.5%	51.9%	52.2%	51.3%
* $p(\chi^2) < .05$										

- Graduate/professional students were more likely than undergraduates to report having been diagnosed with or treated for back pain, endometriosis, high blood pressure, and high cholesterol but less likely than undergraduates to report having been diagnosed with or treated for Chlamydia, a sinus infection, and strep throat.

Across all respondents, the average number of these various health problems they reported having been diagnosed with or treated for in the past year was 1.0, but 48.4% of the respondents reported having none of these health problems – very similar to the 49.9% in 2016 and 48.1% found in 2014. Among those who were diagnosed with or treated for at least one problem, the average number was 2.0 different problems, virtually the same as in 2016, 2014, 2012 and 2010.

RESULTS: Impediments to Academic Performance

Another section of the questionnaire asked respondents if, within the previous twelve months, they had each of 31 different kinds of problems – illnesses, substance abuse, victimization, emotional problems, and other behavioral problems – and, if so, the extent to which the experience affected their academic performance. Table 23 shows the percentage of all respondents who reported not having had each of the various problems, the percentage who said they had the problem but that it did not affect their academic performance, and the percentage who said they had the problem and that, as a result, they received a lower grade on an exam or important project, received a lower grade in a course, received an incomplete or dropped a course, or their thesis or dissertation work was disrupted. The table indicates that the most common health problem was stress which was reported to have been a problem for 68.0% of students (similar to the reported 66.9% in 2016, 71.0% in 2014, 79.1% in 2012 and 74.8% in 2010) – 38.9% had problems with stress but claimed it did not affect academic performance plus 29.1% who had problems with stress and claimed it did affect academic performance in one of the four ways – this is up slightly from the 26.9% reported in 2016, 27.6% in 2014, 24.5% in 2012 and the 21.9% in 2010.

The table indicates that the ten most common health problems were:

1. Stress (**68.0%** vs. 66.9% in 2016, 71.0% in 2014, 79.1% in 2012)
2. A cold/flu/sore throat (**47.7%** vs. 43.9% in 2016, 53.8% in 2014, 50.1% in 2012)
3. Sleep difficulties (**46.8%** vs. 46.2% in 2016, 49.3% in 2014, 52.3% in 2012)
4. Anxiety (**46.7%** vs. 45.7% in 2016, 47.3% in 2014, 40.9% in 2012)
5. Work (**40.0%** vs. 39.8% in 2016, 46.6% in 2014, 47.0% in 2012)
6. Alcohol use (**35.0%** vs. 37.0% in 2016, 48.5% in 2014, 52.2% in 2012)
7. Participation in extracurricular activities (**33.2%** vs. 34.3% in 2016, 40.5% in 2014, 37.6% in 2012)
8. Internet use/computer games (**30.1%** vs. 37.1% in 2016, 42.2% in 2014, 45.7% in 2012)
9. Depression (**28.9%** vs. 24.8% in 2016, 25.2% in 2014, 23.3% in 2012)
10. Concern for a troubled friend/family member (**27.9%** vs. 29.1% in 2016, 32.3% in 2014, 33.0% in 2012)

Table 23. Percentage of Respondents Who Had Various Problems in Past 12 Months That Did or Did Not Affect Academic Performance: 2018

				% Who Had and Academic Performance Affected												
				GENDER		RACE			RESIDENCE		Student Status		CUMULATIVE GPA			
Health Problem		% Did Not Have	% Had, No Effect	% Had, Some Effect	Male	Female	White	Other	Internatl.	On	Off	Undergrad	Grad/Prof	A	B	C/D/F
A.	Alcohol use	65.0%	30.6%	4.4%	6.2%	2.8% *	5.0%	4.6%	0.6% *	2.9%	5.2%	5.6%	0.7% *	1.9%	6.4%	16.5% *
B.	Allergies	80.1%	18.6%	1.4%	1.7%	0.9%	1.1%	3.0%	0.0% *	0.7%	1.6%	1.5%	0.7%	0.6%	1.7%	6.0% *
C.	Anxiety	53.3%	25.2%	21.5%	15.0%	27.5% *	22.7%	25.1%	11.0% *	20.1%	22.2%	23.1%	16.7% *	14.8%	27.6%	48.2% *
D.	Assault (physical)	96.6%	2.5%	1.0%	1.4%	0.5%	0.9%	1.3%	0.6%	0.7%	1.0%	1.1%	0.7%	0.3%	0.7%	7.1% *
E.	Assault (sexual)	94.6%	3.7%	1.6%	0.5%	2.7% *	1.4%	3.0%	0.6%	2.2%	1.4%	2.0%	0.7%	0.6%	2.2%	8.3% *
F.	Attention Deficit Disorder	88.7%	3.7%	7.6%	9.0%	6.3%	7.8%	10.3%	3.5% *	5.8%	8.4%	9.0%	3.1% *	3.1%	12.2%	22.6% *
G.	Cold/Flu/Sore Throat	52.3%	32.1%	15.6%	13.3%	17.7% *	16.3%	20.9%	5.8% *	16.5%	15.1%	17.7%	9.2% *	11.0%	21.0%	26.2% *
H.	Concern for troubled friend/family	72.1%	19.2%	8.7%	5.9%	11.4% *	8.0%	13.7%	5.2% *	8.8%	8.7%	8.5%	9.2%	7.3%	9.5%	14.5%
I.	Chronic illness (diabetes, asthma, etc.)	91.0%	4.9%	4.1%	4.1%	4.1%	3.6%	8.1%	0.6% *	2.4%	4.8% *	4.9%	1.4% *	3.4%	4.1%	11.9% *
J.	Chronic pain	91.3%	6.6%	2.1%	1.2%	3.0% *	1.9%	3.4%	1.8%	1.5%	2.5%	2.2%	1.7%	1.7%	2.4%	4.8%
K.	Death of friend or family member	86.2%	8.5%	5.3%	4.8%	5.7%	5.6%	5.1%	4.1%	4.9%	5.5%	5.7%	4.1%	3.1%	8.4%	7.2% *
L.	Depression	71.1%	12.5%	16.4%	14.1%	18.4% *	16.9%	21.5%	7.0% *	16.5%	16.4%	17.7%	11.9% *	11.0%	19.9%	42.9% *
M.	Discrimination	92.9%	5.4%	1.7%	1.4%	2.1%	0.9%	3.0%	4.1% *	1.5%	1.9%	1.7%	1.7%	1.2%	1.9%	7.1% *
N.	Drug use	93.7%	4.1%	2.2%	3.3%	1.3% *	2.0%	4.2%	1.2%	2.2%	2.2%	2.8%	0.7% *	1.6%	2.4%	7.1% *
O.	Eating disorder/problem	95.9%	3.1%	1.0%	1.6%	0.5%	0.9%	1.7%	0.6%	0.2%	1.4%	1.2%	0.3%	0.9%	1.0%	2.5%
P.	Finances	76.7%	18.2%	5.0%	6.1%	4.1%	4.0%	9.5%	4.1% *	1.5%	6.8% *	5.8%	2.4% *	2.5%	7.2%	16.5% *
Q.	Gambling	97.6%	2.3%	0.1%	0.2%	0.0%	0.1%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	1.2% *
R.	Homesickness	75.9%	21.1%	3.0%	2.1%	3.8%	2.1%	4.7%	4.1%	3.4%	2.7%	2.7%	3.8%	2.3%	4.3%	2.4%
S.	Injury	90.5%	7.3%	2.3%	2.4%	2.2%	1.7%	3.0%	4.1%	0.7%	3.0% *	2.4%	1.7%	2.2%	2.4%	2.4%
T.	Internet use/computer games	69.9%	19.4%	10.7%	15.5%	6.3% *	9.7%	13.2%	11.8%	11.9%	10.2%	12.7%	4.5% *	8.9%	13.4%	15.3% *
U.	Learning disability	96.1%	1.6%	2.3%	2.2%	2.4%	2.2%	3.4%	1.2%	2.2%	2.4%	2.9%	0.7% *	1.0%	2.7%	11.9% *
V.	Participation in extracurricular activities	66.8%	24.9%	8.3%	7.2%	9.3%	8.1%	13.2%	2.4% *	9.0%	8.0%	10.4%	1.7% *	6.4%	11.5%	9.5% *
W.	Pregnancy (self or partner)	98.8%	0.6%	0.6%	0.9%	0.5%	0.4%	0.9%	1.2%	0.0%	1.0% *	0.3%	1.7% *	0.3%	1.0%	1.2%
X.	Relationship difficulty	74.5%	16.1%	9.4%	10.8%	8.0%	8.9%	9.9%	10.7%	8.8%	9.6%	10.6%	5.8% *	5.7%	14.7%	15.7% *
Y.	Roommate difficulties	75.2%	19.8%	5.0%	5.4%	4.6%	5.2%	7.3%	1.2% *	5.9%	4.5%	6.1%	1.7% *	3.5%	7.0%	8.3% *
Z.	Sexually transmitted disease	98.2%	0.8%	1.0%	1.4%	0.6%	0.7%	2.1%	0.6%	1.0%	1.0%	1.2%	0.3%	0.4%	1.0%	4.8% *
AA.	Sinus/ear infection, bronchitis, strep	84.9%	10.3%	4.9%	4.8%	4.9%	4.7%	6.4%	3.5%	4.9%	4.8%	5.9%	1.7% *	3.6%	5.7%	9.5% *
BB.	Sleep difficulties	53.2%	28.6%	18.2%	16.2%	20.0%	18.2%	24.8%	9.4% *	18.5%	18.0%	21.2%	8.9% *	12.7%	22.2%	44.0% *
CC.	Stress	32.0%	38.9%	29.1%	24.2%	33.6% *	28.9%	37.9%	17.8% *	27.8%	29.7%	31.7%	21.2% *	22.5%	34.0%	58.8% *
DD.	Work	60.0%	27.5%	12.5%	9.8%	14.8% *	12.9%	15.5%	6.5% *	7.1%	15.2% *	13.8%	8.5% *	9.8%	14.3%	28.6% *
EE.	Other	97.5%	0.6%	1.9%	1.7%	1.8%	1.0%	3.3%	4.6% *	0.8%	2.5%	1.9%	2.0%	1.3%	1.5%	7.7% *
* p(x ²) < .05																

* $p(\chi^2) < .05$

The eight least common problems were:

1. Drug use (**6.3%** vs. 6.9% in 2016, 10.2% in 2014, 10.0% in 2012)
2. Sexual assault (**5.4%** vs. 2.6% in 2016, 3.7% in 2014, 2.8% in 2012)
3. Eating disorders/problems (**4.1%** vs. 3.7% in 2016, 4.9% in 2014, 4.0% in 2012)
4. Learning disabilities (**3.9%** vs. 4.3% in 2016, 4.3% in 2014, 4.6% in 2012)
5. Physical assault (**3.4%** vs. 2.2% in 2016, 3.5% in 2014, 3.2% in 2012)
6. Gambling (**2.5%** vs. 2.1% in 2016, 2.9% in 2014, 4.3% in 2012)
7. Sexually transmitted disease (**1.8%** vs. 0.7% in 2016, 2.6% in 2014, 2.2% in 2012)
8. Pregnancy (**1.2%** vs. 0.9% in 2016, 2.6% in 2014, 2.3% in 2012)

The first five most common problems are the same five problems as were reported in 2016. The only difference is that colds/flu/sore throat rose from fourth to second most common in 2018. There were shifts among the second five most common problems with depression rising from the twelfth most common to the ninth most common in 2018 while internet use/games dropped from sixth to eighth.

The eight least common problems includes the same set of problems as in 2016 except for discrimination which was ninth least common in 2018. However, the ordering of the eight least common problems in 2018 varies from 2016. For most of these eight problems, the difference in the percentages reporting experiencing the problem from 2016 to 2018 is less than the margins of error for the samples, so the change in the ordering of these eight problems means little.

Figure 20 shows the percentage of students who reported experiencing problems with various circumstances and the portion of these who also reported their academic performance was impaired by having the problem in the past year. The problems are listed in descending order of prevalence. The figure indicates that not all problems, if experienced, were equally likely to adversely impact academic performance.

This can be more clearly seen in Figure 21. This figure shows only the percentages of students who reported their academic performances were adversely impacted if they experienced the problem at all.

Comparing Figures 20 and 21 makes it clear that many students experience difficulties with some problems but manage the problem without it affecting their academic work. For example, more students report experiencing problems with alcohol use than with depression (35.0% vs. 28.9%), but far more students report that their academic performance was impaired by depression than by alcohol use (16.4% vs. 4.4%).

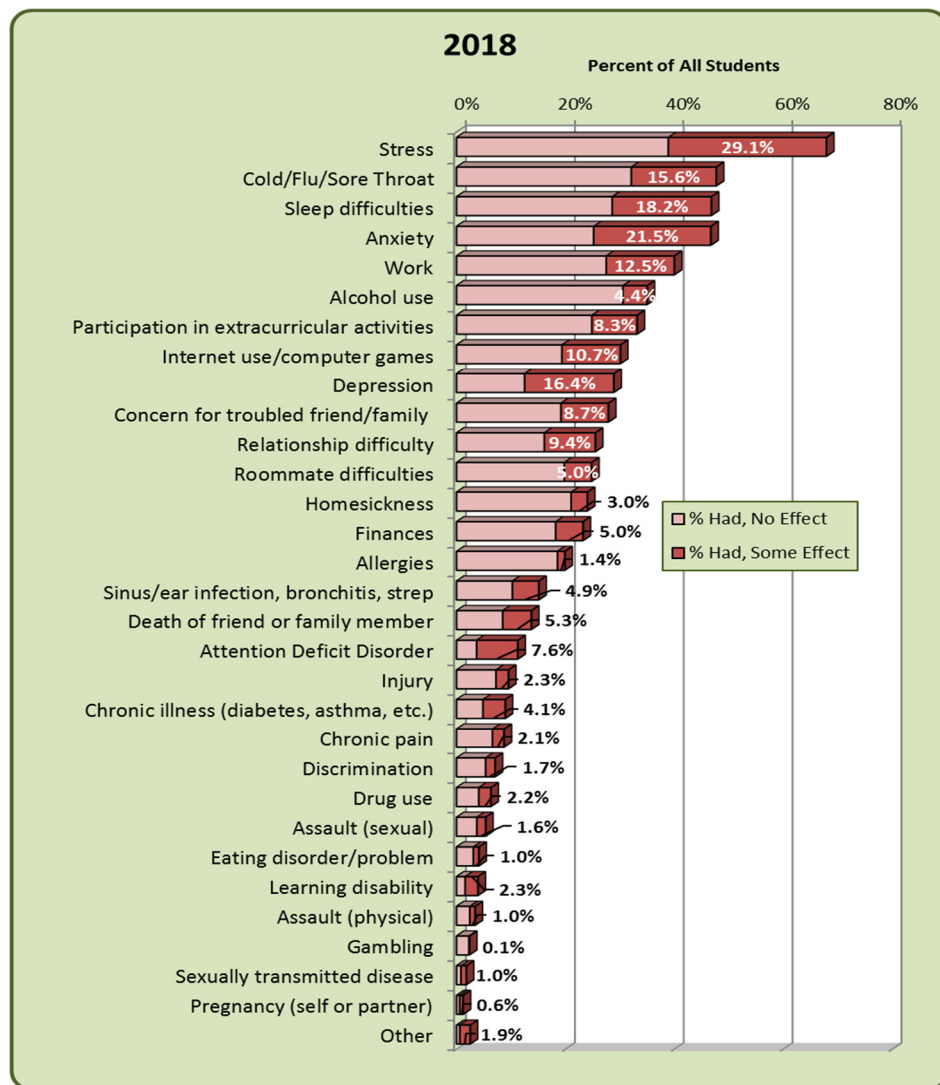


Figure 20. Percentage of Students Whose Academic Performance Was Impaired by Problems Encountered During Year, 2018

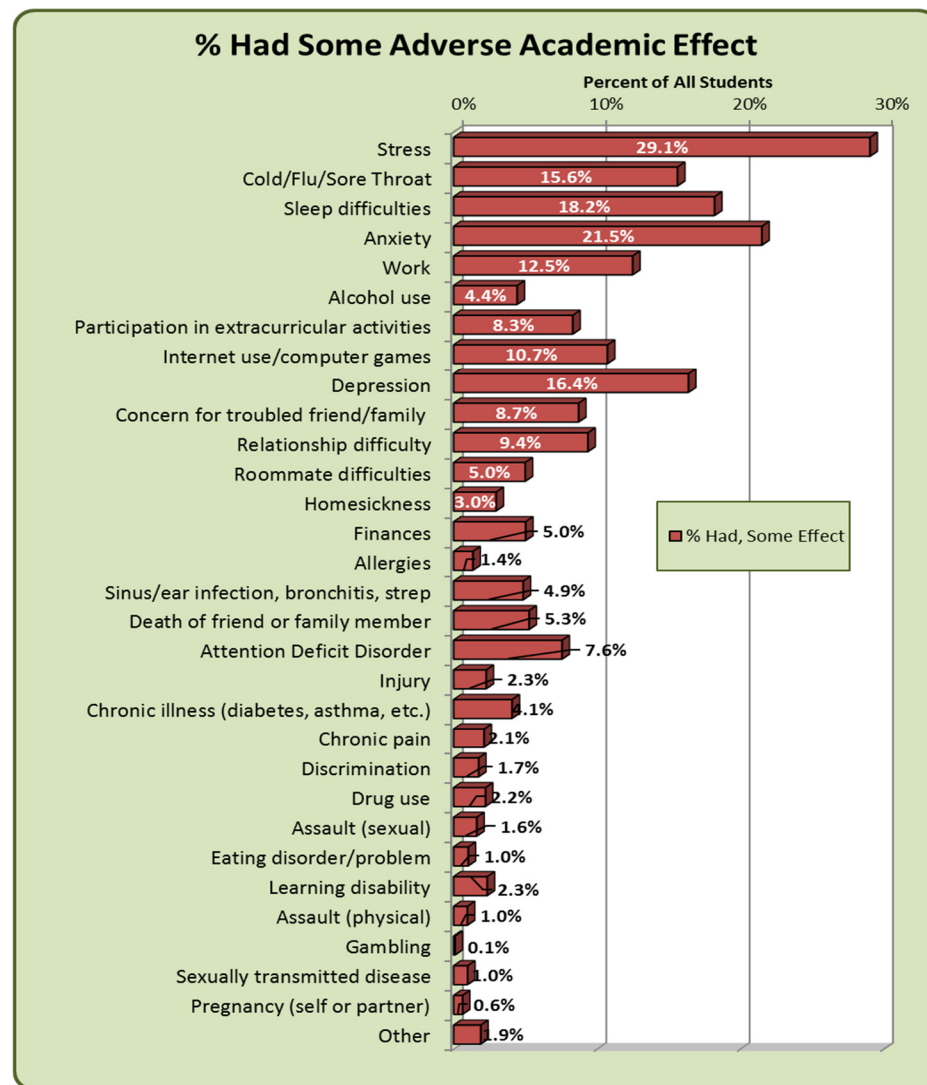


Figure 20. Percentage of Respondents Academically Impaired by Various Health-Related Problems: 2018

There are also some problems which only a few students experience, but for those who do, the likelihood of academic impairment is quite great. This is more clearly seen in Figure 22. As Figure 20 shows, many students report experiencing roommate difficulties and few report problems with Attention Deficit Disorder (ADD), but Figure 22 indicates that, while 37% of those who experienced roommate problems were impaired academically as a result, 67% of those experiencing problems with ADD were academically impaired as a result. Besides ADD, depression, pregnancy, sexually transmitted diseases and learning disabilities are also examples of relatively uncommon problems that appear to be highly likely to affect adversely the individual's academic performance.

On the other hand, the figures indicate there are other problems that are quite commonly experienced – such as stress, anxiety or sleep difficulties – which also are very likely to adversely impact academic performance if encountered.

Table 23 indicates that the academic performances of some types of students were more likely to be impaired by the various health-related problems than others. The table indicates that:

- Females were more likely than males to report academic impairment as a result of anxiety, death of a friend or family member, sexual assault, cold/flu/sore throat, concern for a troubled friend/family member, chronic pain, depression, stress, and work, while males were more likely than females to report impairment as a result of alcohol use and internet use/computer games.

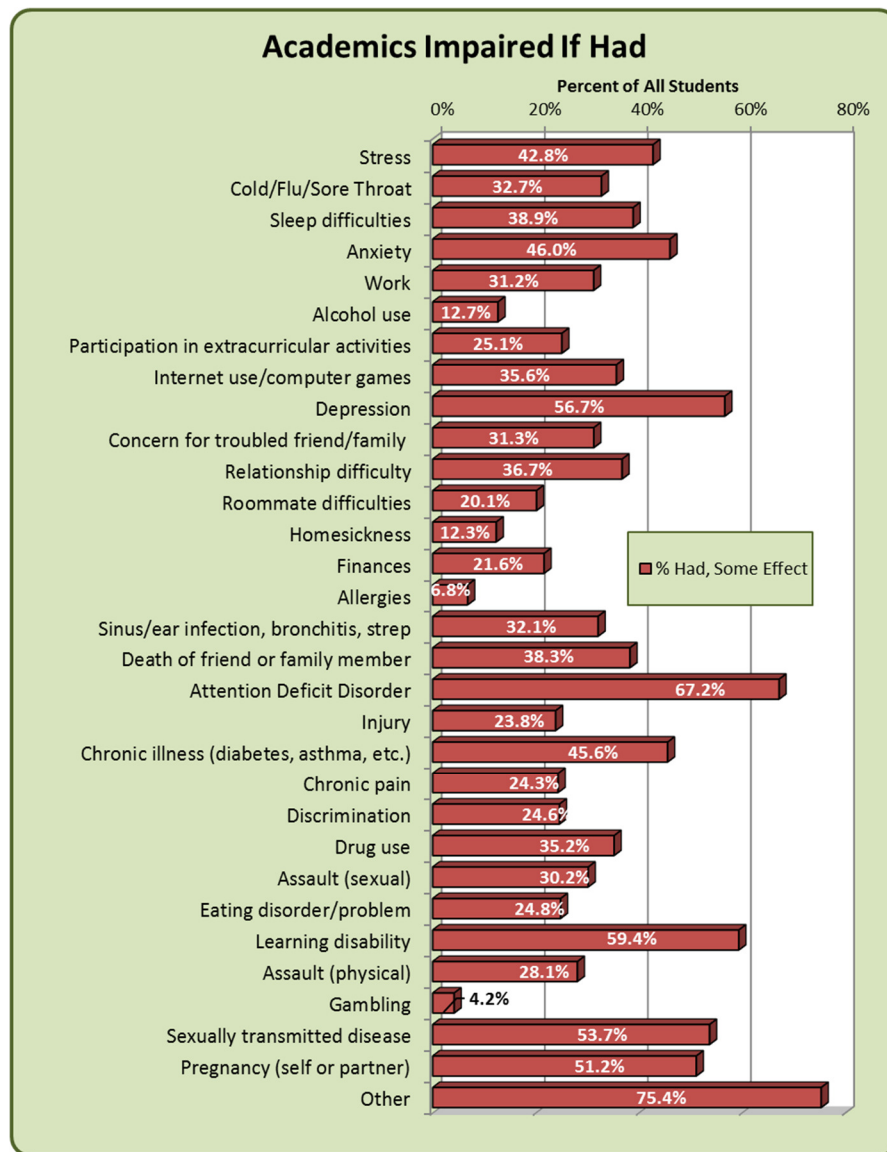


Figure 21. Percentage of Those Whose Academic Performance Impaired If Experienced Particular Problem During Year, 2018

- White and Other domestic respondents were more likely than international students to report academic impairment as a result of alcohol use, allergies, anxiety, ADD, cold/flu/sore throat, concern for a troubled friend/family member, chronic illness, depression, participation in extra-curricular activities, roommate difficulties, sleep difficulties, stress, and work, while international students and Other domestic students were more likely than White domestic students to report academic impairment as a result of discrimination.
- Off campus respondents were more likely than their on campus counterparts to report academic impairment as a result of chronic illness, finances, injury, pregnancy and work problems.
- Undergraduates were more likely than graduate/professional students to report academic impairment as a result of 17 of the 31 problems listed, while graduate/professional students were more likely to report academic impairment as a result of pregnancy.
- There were statistically significant differences in the percentages who reported academic impairment on 25 of the 31 health-related types of problems among respondents with different grade point averages. In general, respondents with lower grade point averages were more likely than their counterparts to report having been academically impaired “as a result” of the problem. This is very similar to the pattern found in each of the other surveys since 2010.

The patterns described above have been very similar across the last five NCHA surveys. Here we repeat the comment we have made in the previous reports as well:

It may be very useful to inform students how much their success in college may be directly influenced by these various problems. Some of the problems (e.g., participation in extracurricular activities, alcohol use, internet use) are within their power to prevent or control. Others (e.g., financial difficulties, death of a family member or friend, assault) may not be within their ability to prevent but may be managed or coped with more or less well. Making students aware of the prevalence of these problems and their potential impacts while also encouraging them to seek assistance and identifying resources available at the University seems key to improving students' chances to thrive and succeed. Troubles will come. Success is usually still an option. “

In the next section, we examine results of questions intended to gauge the distribution and utility of information provided to students by the University to help them cope or thrive while at MSU.

RESULTS: Distribution of Health Information on Campus

Respondents were asked to indicate whether or not they had ever received health-related information from MSU on each of a variety of health topics and about which of these they are interested in receiving information. Table 24 shows the percentages of all respondents, for each topic, who claimed to have received information from MSU. The table indicates that:

- The five topics about which the greatest percentages of respondents reported receiving information were: Sexual assault/relationship violence, Alcohol and other drug use prevention, Depression/anxiety, Stress reduction, and STD/I prevention. The five topics about which the fewest said they received information were Problem use of the internet/computer games, Grief and loss, Sleep difficulties, Eating disorders, and Injury and violence prevention.
 - 94.6% reported receiving information on sexual assault/relationship violence prevention (up from 91.0% in 2016, 75.8% in 2014, 73.8% in 2012, 66.9% in 2010, 45.6% in 2008 and 49.1% in 2006) – the increase in the latter is consistent with the implementation of a mandatory sexual assault/relationship violence prevention program begun nine years ago for all freshmen.
 - Eight out of ten (81.3%) reported receiving information on alcohol and other drug use prevention – virtually the same as the 80.3% reported in 2016, which was up from the 74.4% reported in 2014, 72.2% in 2012 and 71.7% in 2010.
 - Seven out of ten (70.0%) reported receiving information about depression/anxiety – up from 65.4% in 2016 and 52.7% in 2014.
 - More than six out of ten reported receiving information on
 - stress reduction (64.7% -- virtually the same as the 65.7% reported in 2016, which was up from 55.3% in 2014;
 - preventing sexually transmitted diseases or infections (62.3%) – similar to the 65.2% reported in 2016, which was up from 58.0% in 2014,
 - physical activity (61.0%) -- about the same as the 63.2% in 2016, which was up from 58.3% in 2014; and
 - 60.8% reported receiving information on preventing colds, flu, and sore throats – virtually the same as the 60.1% found in 2016, which was down from 69.6% in 2014 and 79.3% in 2001.
- More than half (53.5%) reported receiving information about how to help others in distress – up from 46.8% in 2016, 37.0% in 2014, 34.1% in 2012, and 26.4% in 2010 -- and suicide prevention (51.2%) – up from 47.8% in 2016, 38.5% in 2014, 38.2% in 2012, and 28.3% in 2010. The increases

are consistent with the implementation of suicide prevention and help-seeking education modules in the academic orientation program for incoming freshmen in the past eight years.

- A third (34.3%) reported receiving information regarding sleep difficulties– up from 31.0% in 2016 and 23.5% in 2014 -- noteworthy in light of the percentage of students who reported experiencing sleep problems and academic impairment as a result of sleep difficulties.
- 4.8% claimed never to have received information from the University on any of these topics.

Table 24. Percentage of Respondents Who Ever Received Information from MSU, Interested in Receiving Information on Various Health Topics: 2018				
Health Topic	All Respondents			
	% Who Ever Received Information	% Interested In Receiving Information	Received	
			No	Yes
			Want Info	Want More
Alcohol and other drug use prevention	81.3%	36.0%	14.8%	41.0%
Cold/flu/sore throat	60.8%	48.6%	39.8%	54.4%
Depression/anxiety	70.0%	62.3%	51.6%	66.9%
Eating disorders	29.1%	39.9%	36.8%	47.7%
Grief and loss	38.0%	51.2%	49.3%	54.1%
How to help others in distress	53.5%	69.2%	65.8%	72.2%
Injury and violence prevention	32.7%	47.9%	43.4%	57.5%
Nutrition	46.9%	66.8%	62.1%	71.7%
Physical activity	61.0%	62.4%	54.9%	67.1%
Pregnancy prevention	48.5%	42.6%	34.0%	52.0%
Problem use of internet/computer games	17.1%	29.2%	25.9%	45.5%
Relationship difficulties	59.0%	49.0%	42.5%	53.5%
Sexual assault/relationship violence prevent	94.6%	59.2%	29.2%	60.9%
STD/I prevention	62.3%	54.5%	46.0%	59.4%
Sleep difficulties	34.3%	64.3%	61.8%	69.2%
Stress reduction	64.7%	73.2%	67.2%	76.6%
Suicide prevention	51.2%	56.8%	51.1%	62.5%
Tobacco use	49.2%	32.0%	22.7%	41.5%
Violence prevention	57.9%	54.1%	47.2%	59.1%
None of the above	4.8%	17.5%	--	--

Respondents were also asked to indicate if they would be interested in receiving information on each of these topics. Table 24 shows the results for this also.

Typically, 30-60% of respondents indicated interest in receiving information on the topics. The greatest percentages of students expressed interest in receiving information on stress reduction (73.2%), how to help others in distress (69.2%), nutrition (66.8%), sleep difficulties (64.3%), physical activity (62.4%), and depression/anxiety (62.3%) -- a very similar list to those of the previous three surveys.

Most of these are issues that many students face in the course of the year and are also identified by many students as impediments to the academic performance. It is noteworthy that sleep difficulties is the issue

about which one of the greater percentages of students say they want information but one of the smaller percentages report having received information yet.

In the table, we also show the percentage of students who expressed an interest in receiving information on each topic comparing those who said they had not already received information to those who said they had. Typically, those who reported having received information on a topic were more likely to indicate an interest in receiving more information than were those who said they had never received any information on the topic. This seems to suggest those who received information found it interesting or useful, and that it piqued their interest in more (perhaps) detailed information.

RESULTS: Special Topics

The results reported thus far have been based on standard questions included in the NCHA questionnaire (Version II). However, from time to time, MSU officials choose to include additional questions on the NCHA questionnaire to be administered at MSU. Sometimes these have been extra questions related to topics already covered on the NCHA, while at other times the additional questions have been on other topics of interest to MSU that are otherwise not addressed or not fully addressed by the standard NCHA questionnaire. In 2018, MSU added a number of questions of both types, i.e., those that expand on topics already addressed, and those that address new topics.

As in 2016, one of the additional topics that MSU wanted to explore in 2018 had to do with the implementation of a tobacco-free campus policy and student exposure to second-hand smoke and other tobacco-related by-products. Also in 2018, MSU wanted to investigate an additional alcohol-related issues – i.e., support for special housing arrangements for students in recovery – and an additional set of questions focused on campus safety and fears. The results for each of these additional items will be presented in this section of the report.

TOBACCO-FREE CAMPUS AND SECOND-HAND EXPOSURE TO TOBACCO PRODUCTS. In late 2015, MSU began consideration of a policy change to ban the use of tobacco products from all MSU properties (i.e., building, campus grounds and facilities, motor vehicles, extension sites, farms, etc.). In order to measure the support or opposition to such a policy change and to measure its impact once implemented, three questions were added to the 2016 NCHA questionnaire. In 2018, these questions were asked again – with minor modifications to reflect the actual implementation of the policy change – to examine what changes may have occurred regarding exposure to second-hand smoke and tobacco residues and opinions regarding the policy change.

The first question was intended to measure respondents' exposure to the use of tobacco products on campus prior to implementation. This two-part Yes/No question asked was:

In the past month, have you . . .



- a. *experienced even brief exposures to second-hand tobacco smoke anywhere on campus?*
- b. *noticed smoking-related litter or other tobacco-related residues anywhere on campus?*

The second question concerned the respondents' awareness that such a policy change had been implemented. And the third question asked the respondents' their opinion regarding the policy change. The wording of these questions in 2018 were as follows:

Are you aware that MSU enacted a Tobacco Free Campus policy two years ago??

Do you favor or oppose a 'tobacco free campus' policy at MSU?

Table 25 shows the results for these questions both overall for 2016 and 2018 and within selected demographic groups of students. The table indicates that:

- 56.8% of respondents reported exposure to second-hand smoke in the past month – down from 70.6% in 2016 -- and 52.4% reported encountering tobacco-related litter or trash – compared to 63.6% in 2016.
 - There were no significant differences by sex or race in the responses to these questions in 2018.
 - Younger respondents and undergraduates were more likely than their counterparts to report both exposure and noticing residues on campus.
- More than nine out of ten respondents (90.5%) said they were aware that the University had enacted a Tobacco-Free Campus policy two years earlier.
 - Males, domestic students, younger students, and undergraduates were more likely than their counterparts to report being aware that such a policy change took place.
- Nearly nine out of ten (89.2%) respondents said they favored the policy change – up from 83.1% who claimed to support the proposed change two years earlier.
 - Females were more likely than males to support the policy change.
 - Graduate/professional students were more likely to support the policy change than were undergraduates.
 - There were no significant differences in support for the policy change based on race or age.

Table 25. Responses Regarding Experiences with Second-Hand Smoke, Tobacco Residues, and Familiarity with and Attitudes Toward Tobacco-Free Campus Policy, by Background Characteristics: 2018																
Questions				% Of Respondents												
				Overall		GENDER		RACE			Age Group				Student Status	
						Male	Female	White	Other	Internatl.	18-19	20-21	22-23	24 or older	Undergrad	Grad/Prof
In the past month, have you experienced anywhere on campus . . .				2016	2018											
. . . even brief exposures to second- hand tobacco smoke?		Yes	70.6%	56.8%	57.1%	56.4%	58.3%	57.4%	48.9%	61.4%	61.4%	59.0%	43.7% *	61.6%	41.7% *	
		No	29.4%	43.2%	42.9%	43.6%	41.7%	42.6%	51.1%	38.6%	38.6%	41.0%	56.3%	38.4%	58.3%	
. . . noticed smoking-related litter or other tobacco-related residues?		Yes	63.6%	52.4%	53.3%	51.5%	54.1%	47.7%	50.3%	62.7%	53.5%	56.3%	36.9% *	57.7%	35.8% *	
		No	36.4%	47.6%	46.7%	48.5%	45.9%	52.3%	49.7%	37.3%	46.5%	43.7%	63.1%	42.3%	64.2%	
In the past few years, some universities in the U.S adopted 'tobacco free campus' policies. Typically, a 'tobacco free campus' policy bans smoking and the use of all tobacco products on or in any university property, buildings and vehicles and applies to all students, faculty, staff and visitors.																
Are you aware that MSU enacted a Tobacco Free Campus policy two years ago?		Yes	62.5%	90.5%	92.6%	88.6% *	91.0%	92.4%	85.1% *	94.7%	95.1%	91.8%	78.0% *	94.8%	77.1% *	
		No	37.5%	9.5%	7.4%	11.4%	9.0%	7.6%	14.9%	5.3%	4.9%	8.2%	22.0%	5.2%	22.9%	
Do you favor or oppose a 'tobacco free campus' policy at MSU?***		Favor	83.1%	89.2%	84.4%	93.7% *	88.6%	90.7%	90.2%	91.3%	86.1%	90.2%	91.2%	87.9%	93.2% *	
		Oppose	16.9%	10.8%	15.6%	6.3%	11.4%	9.3%	9.8%	8.7%	13.9%	9.8%	8.8%	12.1%	6.8%	
* p(χ2) < .05																

** Asked as "Are you aware that MSU is moving toward enacting a policy to become a Tobacco Free Campus?" in 2016

*** Asked as "Would you favor or oppose implementation of a 'tobacco free campus' policy at MSU?" in 2016

Housing Accommodations for Students in Recovery. A number of students and staff at MSU were concerned about the extent to which the University is supportive of those students who have experienced problems with alcohol or other drugs but have regained sobriety and a margin of control over their behaviors through counseling, recovery programs or individual efforts. Some students and staff have suggested that the University could do more to assist such students in overcoming their addictions by carving out housing environments on campus where abstinence from alcohol and other drugs is more actively encouraged.

Two questions were added to the 2018 NCHA at MSU to explore this issue. The first question described recovery from alcohol and other drugs addiction as “a process of change through which individuals become abstinent and improve their health, wellness, and quality of life,” then simply asked the respondents whether or not they considered themselves to be in recovery. Responses to this question would at least assess the size of the population that is potentially in need.

The second question described recovery housing as “a living environment free of alcohol and other drugs where students in recovery from addiction can live and learn together,” asked respondents whether they would favor or oppose establishment of some recovery housing at MSU.

Table 26 shows the results for these two questions both overall and broken down by sex, race, age group, and student status. It also compares the responses regarding support for recovery housing for those claiming to be in recovery to those of other students.

The table indicates that:

- 3.2% ($\pm 0.9\%$) of respondents reported considering themselves to be in recovery. With a student body of roughly 47,950 students, 3.2% represents 1,534 (± 473) students who might qualify for such housing if it were available.
 - Males and females were about equally likely to consider themselves as being in recovery;
 - Domestic White students were least likely to consider themselves as in recovery as were those 18-19 years of age compared to their respective counterparts.
- Overall, 73.5% of respondents indicated they strongly (42.1%) or somewhat (31.4%) favor establishment of some recovery housing at MSU.
 - Respondents who claimed to be in recovery were only slightly more likely to favor establishment of recovery housing than were those not in recovery (77.5% vs. 73.3%);
 - Females were more likely to favor recovery housing than males, domestic students were more likely than international students, older students and graduate/professional students were more likely to favor recovery housing than were younger students and undergraduates.

Table 26. Opinions Regarding Providing Special Housing for Students in Recovery at MSU: 2018																
OVERALL			% Of Respondents													
			In Recovery		Sex		RACE			Age Group				Student Status		
			Yes	No	Male	Female	White	Other	Internatl.	18-19	20-21	22-23	24 or older	Undergrad	Grad/Prof	
Questions																
Do you consider yourself to be in recovery?																
	Yes	3.2%	--	--	3.4%	3.0% NS	1.7%	3.8%	9.4% *	0.7%	4.4%	3.3%	3.9% *	3.2%	3.1% NS	
	No	96.8%	--	--	96.6%	97.0%	98.3%	96.2%	90.6%	99.3%	95.6%	96.7%	96.1%	96.8%	96.9%	
Do you favor or oppose the establishment of some recovery housing at MSU?																
	Strongly Favor	42.1%	47.5%	41.7% NS	37.9%	45.9% *	41.4%	47.9%	37.6% *	40.3%	34.2%	45.1%	55.0% *	39.1%	51.4% *	
	Somewhat Favor	31.4%	30.0%	31.6%	31.8%	31.0%	32.8%	30.5%	26.5%	27.3%	37.1%	34.1%	24.5%	32.1%	29.5%	
	Neither Favor Nor Oppose	22.5%	22.5%	22.6%	25.0%	20.2%	21.9%	17.4%	31.8%	26.3%	24.5%	17.6%	18.4%	24.1%	17.5%	
	Somewhat Oppose	2.3%	0.0%	2.4%	2.9%	1.7%	2.0%	3.0%	2.9%	3.7%	2.6%	0.5%	1.4%	2.6%	1.4%	
	Strongly Opose	1.7%	0.0%	1.8%	2.4%	1.1%	1.8%	1.3%	1.2%	2.3%	1.5%	2.7%	0.7%	2.2%	0.3%	
* p(χ2) < .05																

Fear of Victimization. Over the past decade, MSU has focused more sharply on preventing sexual assault and addressing the needs of victims. Some of this effort has involved educating students about legal issues regarding consent and what constitutes assault. Some of this effort has involved clarifying in what kinds of situations sexual assault might occur and how to respond to ward off an attempted assault. And some of the effort has focused on supporting victims, reporting incidents, and apprehending and prosecuting perpetrators.

Earlier in this report, the results of questions regarding perceptions of safety on campus or in the community off campus were presented that indicated that there has been a gradual decline in respondents' feelings of safety on campus -- at least during the daytime -- and a gradual decline regarding feelings of safety off campus in the community both during the daytime and nighttime. At the same time, this report has indicated that the actual percentage of students who report being victimized has declined by 8% since 2000, but that reported sexual assault has increased.

In this context, some MSU staff requested that questions be included in the 2018 NCHA at MSU to attempt to ascertain where on or near campus students seemed to be most apprehensive of the possibility of being sexually assaulted. Respondents were presented the following question:

"Thinking about the risk of being sexually assaulted or harassed, how safe do you feel in . . ." and were then given a list of eight different settings and asked to indicate for each if they felt very safe, somewhat safe, somewhat unsafe, or not safe at all in the setting. The list of settings included an off campus party not sponsored by a fraternity, a party sponsored by a fraternity house either at the chapter house or another location, an MSU team athletic event, in faculty or graduate student offices, in the MSU Union, at a football tailgate, in the residence halls, in the library. Table 27 shows the results.

The table indicates that roughly 95% of students judged it to be very safe or somewhat safe in the MSU Union (96.8%), in the library (95.9%) and in faculty or graduate student offices (95.1%). Roughly nine out of ten judged it to be very safe or somewhat safe in the residence halls (91.7%) and at a football tailgate (87.2%). Fewer judged it to be quite this safe at an MSU team athletic event (83.5%). Of the eight settings listed, the two that were least judged to be very or somewhat safe were at an off campus party not sponsored by a fraternity (68.3%) and at a party sponsored by a fraternity (52.5%).

The setting where respondents most perceived a risk of sexual assault was a party sponsored by a fraternity house either at the chapter house or another location. Nearly half the respondents (47.5%) judged this setting to be somewhat unsafe or not safe at all. In fact, 17.8% of respondents judged this setting to be not safe at all -- twice the percentage of the setting judged to be second most risky.

The table compares the judgement for each setting across categories of sex, race, student status, sexual orientation, and whether or not the respondent reported having been a victim (as listed in Table 17) in the past year. In general, the table indicates that:

Table 27. How Safe or Unsafe Respondents Feel Regarding Risk of Sexual Assault/Harrassment in Various Campus Locations, by Background Characteristics: 2018															
Thinking about the risk of being sexually assaulted or harassed, how safe do you feel in ...			% Of Respondents **												
			GENDER		RACE			Student Status		Sexual Orientation				Victimized in Past Year***	
			Male	Female	White	Other	Internatl.	Undergrad	Grad/Prof	Hetero- sexual	Homo- sexual/ Gay/Lesbian	Bisexual	Unsure/ Other	Yes	No
OVERALL															
An off-campus party not sponsored by a fraternity	Not Safe at All	8.7%	7.4%	9.9% *	5.3%	10.9%	22.1% *	9.0%	7.5% NS	8.6%	5.4%	7.3%	22.7% NS	11.8%	7.4% NS
	Somewhat Unsafe	23.0%	13.8%	31.1%	23.0%	21.9%	23.6%	22.2%	26.5%	22.3%	29.7%	29.3%	27.3%	25.2%	22.1%
	Somewhat Safe	42.1%	38.2%	45.6%	42.8%	45.3%	34.3%	43.5%	36.5%	42.6%	37.8%	43.9%	31.8%	39.0%	43.3%
	Very Safe	26.3%	40.7%	13.4%	28.9%	21.9%	20.0%	25.3%	29.5%	26.6%	27.0%	19.5%	18.2%	24.0%	27.2%
A party sponsored by a fraternity house either at the chapter house or another location	Not Safe at All	17.8%	14.3%	20.7% *	15.4%	22.1%	22.9% *	17.0%	21.2% *	16.8%	31.4%	23.7%	27.3% *	21.6%	15.9% *
	Somewhat Unsafe	29.7%	21.0%	37.4%	32.7%	26.1%	20.6%	28.6%	35.9%	29.4%	37.1%	26.3%	40.9%	35.1%	27.4%
	Somewhat Safe	32.8%	33.5%	32.3%	30.6%	37.2%	37.4%	34.7%	24.1%	33.2%	14.3%	42.1%	31.8%	25.6%	36.1%
	Very Safe	19.7%	31.2%	9.7%	21.3%	14.6%	19.1%	19.7%	18.8%	20.6%	17.1%	7.9%	0.0%	17.7%	20.6%
An MSU team athletic event	Not Safe at All	6.2%	6.7%	5.8% *	4.1%	6.5%	16.1% *	6.2%	6.3% NS	6.1%	9.1%	8.6%	5.0% *	8.6%	5.2% *
	Somewhat Unsafe	10.3%	5.7%	14.3%	8.6%	15.0%	11.7%	9.4%	13.7%	9.8%	12.1%	17.1%	15.0%	13.6%	8.8%
	Somewhat Safe	29.0%	19.7%	37.2%	29.1%	29.0%	28.5%	28.5%	30.7%	27.8%	54.5%	40.0%	30.0%	29.6%	28.8%
	Very Safe	54.5%	67.9%	42.6%	58.1%	49.5%	43.8%	55.8%	49.3%	56.3%	24.2%	34.3%	50.0%	48.2%	57.2%
In faculty or graduate assistant offices	Not Safe at All	2.5%	2.8%	2.2% *	1.2%	2.3%	8.8% *	3.0%	0.8% NS	2.8%	0.0%	0.0%	0.0% *	2.8%	2.4% NS
	Somewhat Unsafe	2.4%	1.7%	3.1%	1.6%	5.0%	2.5%	2.6%	1.9%	1.8%	5.1%	6.1%	11.1%	3.7%	1.9%
	Somewhat Safe	15.8%	10.9%	20.3%	12.3%	25.0%	19.5%	16.5%	13.8%	15.5%	17.9%	22.4%	14.8%	17.7%	15.2%
	Very Safe	79.3%	84.6%	74.4%	84.8%	67.7%	69.2%	77.9%	83.5%	79.9%	76.9%	71.4%	74.1%	75.8%	80.6%
In the MSU Union	Not Safe at All	1.9%	2.1%	1.8% *	1.3%	1.4%	5.7% *	2.2%	0.9% NS	2.2%	0.0%	0.0%	0.0% NS	1.9%	2.0% NS
	Somewhat Unsafe	1.3%	1.7%	0.9%	1.0%	2.8%	0.6%	1.2%	1.8%	1.2%	0.0%	2.3%	0.0%	1.6%	1.2%
	Somewhat Safe	13.3%	9.1%	17.0%	11.0%	20.9%	13.3%	12.7%	15.4%	12.7%	19.5%	25.6%	8.0%	16.8%	11.9%
	Very Safe	83.5%	87.0%	80.4%	86.7%	74.9%	80.4%	83.9%	81.9%	83.9%	80.5%	72.1%	92.0%	79.8%	85.0%
At a football tailgate	Not Safe at All	4.4%	5.7%	3.4% *	2.4%	4.8%	13.9% *	4.7%	3.2% NS	4.2%	11.4%	5.3%	4.3% NS	4.4%	4.5% *
	Somewhat Unsafe	8.3%	5.5%	10.9%	7.8%	9.1%	9.7%	7.6%	11.5%	7.8%	17.1%	7.9%	13.0%	11.6%	6.9%
	Somewhat Safe	38.7%	29.5%	47.0%	36.5%	47.4%	37.5%	39.0%	37.6%	38.3%	37.1%	52.6%	39.1%	42.1%	37.2%
	Very Safe	48.5%	59.3%	38.8%	53.4%	38.8%	38.9%	48.8%	47.7%	49.6%	34.3%	34.2%	43.5%	41.8%	51.3%
In the residence halls	Not Safe at All	2.9%	3.4%	2.6% *	2.0%	3.0%	7.2% *	2.7%	4.1% *	3.0%	2.9%	2.9%	0.0% *	3.9%	2.5% *
	Somewhat Unsafe	5.4%	3.2%	7.6%	5.2%	6.1%	5.9%	4.7%	8.7%	5.0%	5.7%	5.7%	20.0%	6.8%	4.8%
	Somewhat Safe	26.8%	18.9%	34.3%	25.0%	30.5%	30.3%	25.3%	34.9%	26.6%	34.3%	40.0%	12.0%	30.9%	25.1%
	Very Safe	64.8%	74.6%	55.5%	67.8%	60.4%	56.6%	67.3%	52.3%	65.5%	57.1%	51.4%	68.0%	58.5%	67.6%
In the library	Not Safe at All	1.7%	2.1%	1.4% *	1.2%	0.9%	4.9% *	1.9%	0.8% NS	1.9%	0.0%	0.0%	0.0% NS	1.2%	1.9% *
	Somewhat Unsafe	2.3%	1.9%	2.8%	1.6%	5.5%	1.2%	2.3%	2.5%	2.1%	2.4%	4.4%	4.0%	4.4%	1.5%
	Somewhat Safe	10.6%	7.3%	13.6%	9.2%	15.5%	11.0%	11.2%	8.8%	9.9%	19.5%	20.0%	12.0%	12.1%	10.0%
	Very Safe	85.3%	88.7%	82.2%	88.0%	78.2%	82.8%	84.5%	87.9%	86.1%	78.0%	75.6%	84.0%	82.2%	86.6%

* $p(\chi^2) < .05$

** Excludes respondents who indicated the question was "not applicable" -- varied from 7.7% regarding in faculty or graduate assistants offices to 18.7% regarding a fraternity sponsored party

*** Reported being victimized in the past 12 months in one or more of the ways listed in Table 17

- Females judged each of the settings to be less safe than did males;
- White domestic students tended to judge each of the settings as safer than did Other domestic or international students;
- Graduate/professional students judged fraternity-sponsored parties and residence halls as less safe than did undergraduates, but otherwise the graduate/professional students did not differ from undergraduates regarding the safety of the settings;
- Heterosexual respondents judged fraternity-sponsored parties, MSU team athletic events, faculty or graduate student offices, and the residence halls to be safer than did non-heterosexuals; and
- Respondents who had reported being victimized in some way during the previous twelve months judged fraternity-sponsored parties, MSU team athletic events, football tailgates, the residence halls, and the library to be less safe than did non-victims – they were especially likely to judge fraternity-sponsored parties as somewhat unsafe or not safe at all (56.7% vs. 43.3% of non-victims)

In fairness, it is important to note that a much larger percentage of current members of Greek fraternities or sororities judged parties hosted by a fraternity to be very or somewhat safe than did non-members so some of the apprehension of the risk of harassment or sexual assault in such settings may be based on stereotypes or rumors more than facts. Although the number of respondents is small, it is also important to note that members of sororities were much more likely to judge parties hosted by fraternities as safer than parties not hosted by fraternities and safer than faculty or graduate student offices.

It seems reasonable to suspect that respondents' judgments as to the safety or riskiness of the settings at least partly reflects their personal experience or the experience of their friends in the various settings. If so, then the settings in which females perceived substantially greater risk than males, or sexual minorities perceived greater risk than heterosexuals, or recent victims perceived greater risk than non-victims likely indicate settings where harassment or sexual assault has more often occurred. If that is the case, then some of the settings could be more directly targeted by policy, education, or oversight to reduce harmful language and behaviors.

SUMMARY

This report has summarized key results of the 2018 NCHA survey of MSU students. It is an overview of the results rather than an exhaustive statistical exploration of any particular topic. The focus of the analyses has been the prevalence of various health-related behaviors, problems, or conditions among MSU students.

In some parts of the summary, we have compared the results of the survey administered in 2018 to the results from the surveys administered in 2000, 2002, 2004, 2006, 2008, 2010, 2012, 2014 and 2016. Generally, the same sampling plan has been used for each of the surveys and they were administered at virtually the same time in the University calendar.

As we noted early in the report, the questionnaire used in 2010 through 2018 had been greatly redesigned compared to the questionnaire used in the five earlier surveys. Some questions had been added, some in the earlier version had been dropped, some response options had been changed substantively or in format, and some time period references about which respondents were to provide information on events had been changed. While the newer NCHA questionnaire may actually be more informative in the long run, the short-term impact of the revision has been that the results for many questions cannot meaningfully be compared to those from the earlier surveys. We have endeavored to show trends over time where it seems meaningful to do so.

What continues to be impressive is the consistency of the findings for many of the questionnaire items from one survey year to the next. The primary exceptions to this consistency are in health areas that reflect changes in the larger economy that impacts students' financial uncertainties, episodic outbreaks of infectious diseases from year to year, and health education initiatives implemented within the university. In these areas, the inconsistencies in the findings from other years virtually always match what the presumed impacts of such circumstances and efforts would be. This adds credibility to the survey's findings both overall and on individual health items even when differences from year to year appear to be relatively small.

The American College Health Association is the professional association of college and university student health officers. In addition to development and administration of the NCHA to assess the current health of students, they develop a vision regarding where the profession should try to improve health for the population they serve. In the early 2000's they promulgated a set of health goals for the year 2010. In 2011, a task force within ACHA reviewed the results of NCHA and other surveys of students at colleges and universities across the country and updated the goals for the year 2020 – the Healthy Campus 2020 Goals.

In the Appendix to this report, we have included a table listing all 54 of the Healthy Campus 2020 Goals. By design, the status of any college or university relative to 50 of the 54 goals can be assessed by specific questions included in the NCHA questionnaire. In the table of the Appendix, we have printed both the goal for each and the appropriate 2018 and 2016 NCHA survey results for MSU students overall and separately among undergraduates and graduate/professional students. The table also notes for each goal whether, at

this point three-quarters the way through the decade for which the goals were established, MSU has already met the goal or not. This is being provided for information purposes rather than to judge the performance of the current health promotion programs at the University.

The results reported here represent an overview. Much additional analysis is possible that might answer more specific questions about the health, health behaviors, and academic circumstances of MSU students. Nevertheless, much of the analyses covered here might be informative to students regarding what they might do to optimize their attempts to thrive while at MSU and to university administrators who wish to build the supportive environments that lead to student success. That is the continuing goal of the reports of this regularly repeated survey.

APPENDIX:
HEALTHY CAMPUS 2020 GOALS AND MSU
STATUS, 2018



	Topic Area: Health Impediments to Academic Performance	Baseline 2010	Target 2020	MSU STATUS: 2016				MSU STATUS: 2018			
				ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL
AI-1.1	Reduce the proportion of students who report that their academic performance was adversely affected by stress in the past 12 months	27.4%	≤ 24.7%	26.9%	28.1%	22.7%		29.1%	31.7%	21.2%	
AI-1.2	Reduce the proportion of students who report that their academic performance was adversely affected by sleep difficulties in the past 12 months.	20.0%	≤ 18.0%	17.9%	19.4%	13.0%	✓	18.2%	21.2%	8.9%	
AI-1.3	Reduce the proportion of students who report that their academic performance was adversely affected by anxiety in the past 12 months.	18.3%	≤ 16.5%	21.0%	22.3%	16.6%		21.5%	23.1%	16.7%	
AI-1.4	Reduce the proportion of students who report that their academic performance was adversely affected by cold/flu/sore throat in the past 12 months.	18.0%	≤ 16.2%	15.0%	16.8%	8.3%	✓	15.6%	17.7%	9.2%	✓
AI-1.5	Reduce the proportion of students who report that their academic performance was adversely affected by work in the past 12 months.	13.7%	≤ 12.3%	13.5%	14.7%	9.7%		12.5%	13.8%	8.5%	
	Topic Area: Health Communication/Health IT/ECBP	Baseline 2010	Target 2020	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL
HC HC/HIT-a	(Developmental) Increase proportion of students who report that their healthcare providers have satisfactory communication skills.	TBD	TBD								
ECBP-7.2	Increase the proportion of students who report receiving information on injury prevention from their institution.	28.8%	≥ 31.7%	40.4%	42.8%	31.0%	✓	32.7%	35.1%	25.7%	✓
ECBP-7.3	Increase the proportion of students who report receiving information on violence prevention from their institution.	36.0%	≥ 39.6%	59.5%	63.4%	45.2%	✓	57.9%	60.4%	50.2%	✓
ECBP-7.4	Increase the proportion of students who report receiving information on suicide prevention from their institution.	30.1%	≥ 33.11%	47.8%	51.0%	36.1%	✓	51.2%	54.3%	41.5%	✓
ECBP-7.5	Increase the proportion of students who report receiving information on tobacco use from their institution.	35.1%	≥ 38.6%	36.7%	39.2%	27.2%		49.2%	55.2%	30.3%	✓
ECBP-7.6	Increase the proportion of students who report receiving information on alcohol and other drug use from their institution.	64.8%	≥ 71.3%	80.3%	87.7%	53.7%	✓	81.3%	88.9%	57.3%	✓
ECBP-7.7	Increase the proportion of students who report receiving information on pregnancy prevention from their institution.	41.0%	≥ 45.1%	52.2%	59.6%	25.3%	✓	48.5%	57.2%	21.4%	✓
ECBP-7.8	Increase the proportion of students who report receiving information on sexually transmitted disease/infection (STD/I) prevention from their institution.	52.2%	≥ 57.4%	65.2%	71.8%	41.5%	✓	62.3%	69.7%	38.9%	✓
ECBP-7.9	Increase the proportion of students who report receiving information on nutrition from their institution.	52.4%	≥ 57.6%	53.6%	58.6%	35.5%		46.9%	52.6%	29.5%	
ECBP-7.10	Increase the proportion of students who report receiving information on physical activity from their institution.	56.9%	≥ 62.6%	63.2%	65.7%	53.9%	✓	61.0%	64.3%	50.5%	

	Topic Area: Injury and Violence Prevention	Baseline 2010	Target 2020	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL
HC IVP-a	Increase the proportion of students who report wearing a helmet always or most of the time when riding a bicycle within the last 12 months.	34.4%	≥ 37.8%	18.0%	10.2%	51.6%		19.4%	11.0%	50.9%	
IVP-22	Increase the proportion of students who report wearing a helmet always or most of the time when riding a motorcycle within the last 12 months.	85.8%	≥ 94.4%	78.6%	74.6%	93.8%		56.4%	50.0%	81.1%	
IVP-33	Reduce the proportion of students who report being physically assaulted within the last 12 months.	4.7% (ACHA-NCHA II), 4.0% (Core)	≤ 4.2%	2.7%	3.5%	0.5%	✓	2.3%	2.8%	1.0%	✓
IVP-39.3	Reduce the proportion of students who report being in an intimate relationship that was emotionally abusive within the last 12 months.	10.0%	≤ 9.0%	7.6%	8.5%	4.6%	✓	7.3%	7.5%	6.8%	✓
IVP-39.1	Reduce the proportion of students who report being in an intimate relationship that was physically abusive within the last 12 months.	2.5%	≤ 2.2%	2.0%	2.4%	0.5%	✓	1.9%	2.1%	1.4%	✓
IVP-39.2	Reduce the proportion of students who report being in an intimate relationship that was sexually abusive within the last 12 months.	1.6%	≤ 1.4%	1.2%	1.4%	0.5%	✓	1.9%	2.3%	0.7%	
HC IVP-b	Reduce the proportion of students who report being sexually touched without their consent within the last 12 months.	6.0% (ACHA-NCHA II), 3.9% (Core)	≤ 5.4%	7.0%	8.1%	3.2%		8.4%	9.9%	4.1%	
IVP-40	Reduce the proportion of students who report being sexually penetrated without their consent within the last 12 months.	1.5% (ACHA-NCHA II), 2.6% (Core)	≤ 1.4%	1.9%	2.2%	0.9%		2.1%	2.8%	0.0%	
HC IVP-c	Increase the proportion of students who report feeling very safe "on this campus" at night.	31.9%	≥ 35.1%	31.4%	31.8%	30.0%		30.1%	28.4%	35.5%	
	Topic Area: Mental Health and Mental Disorders	Baseline 2010	Target 2020	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL
MHMD-2	Reduce the proportion of students who report attempting suicide within the last 12 months.	1.3%	≤ 1.2%	1.4%	1.5%	0.9%		1.4%	1.5%	1.0%	
MHMD-3	Reduce the proportion of students who report experiencing an eating disorder/problem within the last 12 months.	5.3%	≤ 4.8%	3.7%	3.5%	4.1%	✓	4.1%	4.3%	3.4%	✓
MHMD-6a	Increase the proportion of students reporting a diagnosis of depression and receiving treatment within the last 12 months.	83.5%	≥ 91.9%	84.6%	80.0%	88.9%		74.8%	75.4%	73.9%	
MHMD-6b	Increase the proportion of students reporting a diagnosis of anxiety and receiving treatment within the last 12 months.	78.9%	≥ 86.8%	81.9%	76.0%	87.5%		71.9%	71.2%	74.1%	
	Topic Area: Nutrition and Weight Status	Baseline 2010	Target 2020	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL
NWS-8	Increase the proportion of students who are at a healthy weight.	61.6%	≥ 67.8%	66.3%	68.6%	58.6%		62.3%	64.5%	55.6%	
NWS-9	Reduce the proportion of students who are obese.	11.6%	≤ 10.4%	10.6%	9.6%	14.4%		12.9%	12.7%	13.3%	
NWS-14/15	Increase the proportion of students who report eating five or more servings of fruits and vegetables per day.	6.0%	≥ 6.6%	5.7%	4.5%	10.1%		5.9%	5.1%	8.4%	
	Topic Area: Physical Activity and Fitness	Baseline 2010	Target 2020	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL
PA 2.1	Increase the proportion of students who report meeting current federal guidelines for aerobic physical activity.	48.7%	≥ 53.6%	45.6%	48.3%	36.4%		52.3%	55.4%	42.4%	
PA-2.2	Increase the proportion of students who report meeting current federal guidelines for muscle-strengthening activity.	37.6%	≥ 41.4%	39.1%	40.1%	35.1%		43.1%	44.7%	38.4%	✓

	Topic Area: Sexually Transmitted Diseases and HIV	Baseline 2010	Target 2020	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL
STD-1	Reduce the proportion of students who test positive for chlamydia as reported by their university health services in the last 12 months.	3.4%	≤ 3.1%								
STD-4	Increase the proportion of university health services that report routinely screening sexually active women under the age of 26 for chlamydia.	91.8%	100.0%								
HIV-17a	Increase the proportion of sexually active students who report using condoms, most of the time or always, for vaginal intercourse in the last 30 days.	51.0%	≥ 56.1%	53.7%	57.0%	43.4%		52.3%	56.3%	41.7%	
HIV-17b	Increase the proportion of sexually active students who report using condoms, most of the time or always, for anal intercourse in the last 30 days.	28.2%	≥ 31.0%	29.7%	27.3%	40.0%		30.1%	32.7%	23.1%	
HIV-14	Increase the proportion of students who report having ever been tested for HIV.	25.7%	≥ 28.3%	22.7%	19.1%	35.3%		26.7%	22.8%	38.9%	
	Topic Area: Family Planning	Baseline 2010	Target 2020	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL
FP-1	Decrease the proportion of female students who report an unintended pregnancy in the last 12 months.	1.5%	≤ 1.4%	0.7%	0.8%	0.9%	✓	0.5%	0.4%	0.7%	✓
FP-3	Increase the proportion of college university health services that report offering (dispensing, prescribing, or selling) emergency contraception.	83.3%	≥ 91.6%								
FP-6	Increase the proportion of students or their partner who report using contraception during the last vaginal sexual intercourse.	56.6%	≥ 62.3%	82.8%	83.4%	81.1%	✓	85.7%	86.9%	82.7%	✓
	Topic Area: Substance Abuse	Baseline 2010	Target 2020	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL
SA-13	Reduce the proportion of students who report using marijuana (pot, weed, hashish, hash oil) within the last 30 days.	17.0% (ACHA-NCHA II), 18.1% (Core)	≤ 15.3%	17.4%	19.6%	9.8%		18.2%	20.4%	11.5%	
SA-14	Reduce the proportion of students who report engaging in high-risk drinking of alcoholic beverages within the last two weeks.	35.1% (ACHA-NCHA II), 43.9 (Core)	≤ 31.6%	35.2%	39.1%	20.7%		37.4%	42.2%	22.0%	
SA-19	Reduce the proportion of students who report nonmedical use of prescription drugs within the last 12 months.	15.3%	≤ 13.8%	13.8%	15.1%	9.2%	✓	12.9%	13.7%	10.3%	✓
HC SA-d	Reduce the proportion of students who report driving after consuming any alcohol within the last 30 days.	17.9%	≤ 16.1%	17.0%	12.9%	31.8%		15.1%	10.4%	30.2%	✓
	Topic Area: Tobacco Use	Baseline 2010	Target 2020	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL
TU-1a	Reduce the proportion of students who report cigarette use within the last 30 days.	16.0%	≤ 14.4%	10.7%	11.4%	7.9%	✓	7.6%	8.5%	4.8%	✓
TU-1b	Reduce the proportion of students who report smokeless tobacco use within the last 30 days.	3.9%	≤ 3.5%	3.0%	3.7%	0.9%	✓	2.9%	3.5%	1.0%	✓
HC TU-e	Reduce the proportion of students who report hookah use within the last 30 days	8.2%	≤ 7.4%	5.1%	6.0%	2.3%	✓	1.9%	2.1%	1.4%	✓
	Topic Area: Immunization and Infectious Disease	Baseline 2010	Target 2020	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL	ALL STUDENTS	UNDER-GRAD	GRAD/PROF	MET GOAL
IID-12	Increase the proportion of students who report receiving influenza vaccine in the last 12 months.	39.9%	≥ 43.9%	40.3%	38.3%	47.9%		44.5%	41.6%	53.6%	✓
IID-8a	Increase the proportion of students who report receiving hepatitis B vaccine.	88.6% (NIS-Teen); 73.0%	≥ 80.3%	66.6%	65.9%	69.7%		73.3%	72.7%	75.3%	
IID-8b	Increase the proportion of students who report receiving human papillomavirus/HPV vaccine.	53.1% (NIS-Teen); 33.2%	≥ 36.5%	48.7%	53.3%	32.4%	✓	58.6%	63.1%	44.7%	✓
IID-8c	Increase the proportion of students who report receiving measles, mumps, rubella vaccine.	88.6% (NIS-Teen); 70.9%	≥ 78.0%	72.7%	70.8%	80.2%		73.4%	71.0%	81.2%	
IID-8d	Increase the proportion of students who report receiving meningococcal vaccine.	57.1% (NIS-Teen); 54.7% (ACHA-NCHA)	≥ 60.2%	63.3%	64.6%	59.3%	✓	67.1%	68.6%	62.9%	✓
IID-8e	Increase the proportion of students who report receiving varicella (chicken pox) vaccine.	79.1% (NIS-Teen); 43.4%	≥ 47.7%	60.7%	63.2%	51.9%	✓	64.4%	67.6%	54.3%	✓

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