

Summary of the 2006 National College Health Assessment

A Survey of
University of Michigan Students
Performed by the
American College Health Association



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University of Michigan

Student Health Assessment: Winter 2006

Introduction

In the Winter of 2006, the University of Michigan (UM) participated in the National College Health Assessment Survey through the University Health Service's membership in the American College Health Association (ACHA). The survey was administered on the ACHA website as a web survey designed by ACHA. In February 2006, a random sample of 5,000 undergraduate students was sent an e-mail invitation to participate in the survey by ACHA containing a web-link to the survey. One follow-up e-mail contact was sent to those not responding to the first. Those invited to participate were told they would be entered into a drawing for prizes, specifically Visa, Target or Meijer gift cards for \$50 or \$90. The ACHA staff conducted the drawing and University of Michigan staff notified respondents and distributed prizes. A total of 946 students responded. The overall response rate was 18.9%.

Table 1 provides a profile of the demographic characteristics of the respondents. Because some segments of the student body were somewhat over- or under-represented among respondents, the data set has been weighted based on gender and race/ethnicity so that the final weighted sample matches the proportions of these groups in the UM student body. Table 1 also shows the profile of this final weighted sample. The only significant departure from actual percentages was in the gender of the respondents - women make up 50.9% of the student body, but 60.9% of the respondents to the survey. The distributions of all the other verifiable descriptors were well within expected sampling variance. The analyses summarized here are based on the weighted sample.

Generally, the survey results are generalizable to the Winter 2006 undergraduate population of the University of Michigan. Surveys of random samples of populations produce proportions, percentages, averages, prevalence rates, etc., that are estimates of these in the population. They are expected to be accurate, but within a calculable margin of sampling error. How great or small the margin of error is depends heavily on the size of the sample of respondents. For a survey with a sample of 946 respondents, the margin of sampling error is $\pm 3.2\%$ or less. That is, 95% of samples of this size from this population would produce results that are within $\pm 3.2\%$ of this sample's results.

For results among subgroups of this sample, such as women or members of Greek organizations, the margin of error will be larger because the numbers of these respondents are less. For example, the margin of error on results for the 363 males is $\pm 5.2\%$; for the 135 members of Greek organizations, $\pm 8.5\%$; for the 139 Asian or Pacific Islanders, $\pm 8.1\%$; for the 42 African Americans, $\pm 15.2\%$; for the 39 Latino/Hispanic students, $\pm 15.7\%$; and for the 9 Native American respondents, $\pm 34.1\%$. As in these last couple of examples, comparing the specific results for smaller groups for which there are large margins of error is probably imprudent. Consequently, we will not report results for individual small subgroups, such as Native Americans. In such cases, we will generally make subgroup comparisons for which we

TABLE 1. Profile of the Sample of Survey Respondents (n=946)

	Unweighted n	Unweighted %	Weighted n	Weighted %
Gender				
Female	566	60.9	472	50.9
Male	363	39.1	454	49.1
Age				
18	188	20.1	186	20.0
19	219	23.4	227	24.3
20	225	24.0	220	23.5
21	183	19.5	176	18.8
22	85	9.1	87	9.3
23	13	1.4	13	1.4
24	9	1.0	9	1.0
25+	15	1.5	15	1.5
Race				
White	679	71.8	667	73.4
African American	42	4.4	66	7.2
Hispanic	39	4.1	43	4.8
Asian, Pacific Islander	139	14.7	124	13.7
Native American	9	1.0	8	0.9
Other	38	4.0	34	--
Year in School				
First	270	29.4	275	30.0
Second	215	23.4	215	23.5
Third	208	22.7	207	22.6
Fourth	179	19.5	173	18.9
Fifth or more	42	4.6	46	5.0
Graduate Student or other	3	0.3	0.0	0.0
Cumulative GPA				
A	398	43.0	391	42.3
B	437	47.2	430	46.6
C	78	8.4	88	9.5
D/F	6	0.6	6	0.7
Not Applicable	7	0.8	8	0.9
International Student	49	5.3	46	5.0
Full-time Student	890	96.8	890	97.0
Residence				
Residence Hall	401	43.4	408	44.2
Other University Housing	28	3.0	28	3.1
Fraternity/Sorority	47	5.1	47	5.1
Off-Campus	423	45.7	415	44.9
With Parents or other	26	2.8	24	2.7
Member of Fraternity/Sorority	135	14.6	138	15.0

TABLE 1. (Continued)

	n	%	Weighted n	Weighted %
Have Health Insurance				
Yes	823	89.1	821	89.0
No	55	6.0	57	6.2
Not Sure	46	5.0	45	4.8
Employed weekly	448	48.5	443	48.1
Volunteer weekly	413	44.7	405	44.0
Sexual Orientation				
Heterosexual	874	94.7	869	94.4
Gay/Lesbian	15	1.6	18	1.9
Bisexual	18	2.0	18	1.9
Unsure	16	1.7	16	1.8
How much credit card debt carried last month				
No credit cards	414	45.4%	412	45.3%
None, paid in full	345	37.8%	344	37.8%
\$1 – \$999	105	11.5%	104	11.4%
\$1,000 - \$4,999	43	4.7%	44	4.9%
\$5,000 or more	5	0.5%	5	0.6%

have aggregated some of the smaller groups together into a single larger group. For example, in the case of race/ethnicity, we will generally compare white respondents to all other respondents. We have similarly aggregated smaller subgroups with respect to age, GPA, and residence location.

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
- depression
- incidents of disease or injury
- incidents of stressors
- sources and credibility of health information
- demographic questions

This summary will point out some of the more noteworthy findings of the survey regarding all of these.

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:

- ι Overall, 66.7% of the respondents rated their health as excellent (16.4%) or very good (50.3%).
- ι Males were nearly twice as likely as females (21.7% vs. 11.5%) to rate their health as excellent while females were more likely than males to rate their health as good or fair (37.3% vs. 28.4%).

TABLE 2. Perceived Health Status of Student Respondents

How would describe your general health?	n	Excellent	Very Good	Good	Fair	Poor
Overall	935	16.4	50.3	28.1	4.7	0.5
Gender ***						
Females	471	11.5	50.3	31.6	5.7	0.8
Males	448	21.7	49.8	24.6	3.8	0.2
Race***						
White	662	16.8	53.9	25.8	3.3	0.2
Other	275	15.6	41.5	33.5	8.0	1.5
Age						
18-19	412	16.7	50.5	28.9	3.4	0.5
20-21	393	16.3	48.3	29.5	5.6	0.3
22-23	100	14.0	58.0	19.0	8.0	1.0
24 or older	23	26.1	43.5	26.1	0.0	4.3
Residence						
On-campus	434	17.7	46.8	30.2	4.8	0.5
Off-campus	504	15.3	53.2	26.2	4.6	0.8
GPA *						
A	389	20.1	52.2	22.9	4.4	0.5
B	428	14.0	49.8	31.1	4.4	0.7
C or less	93	10.8	45.2	35.5	8.6	0.0
Fraternity/Sorority						
Member	138	21.7	52.9	22.5	2.2	0.7
Non-member	776	15.7	49.7	29.0	5.0	0.5

* $p(\chi^2) < .05$; ** $p(\chi^2) < .01$; *** $p(\chi^2) < .001$

- † White respondents tended to rate their health somewhat more positively than did their Other race/ethnic counterparts.
- † There were no significant differences between students living on or off campus, or among students of different age groupings. Neither were there significant differences between members of fraternities or sororities and non-members.

Respondents who reported having higher grade point averages tended to rate their health more highly than did those who reported having lower grade point averages. Of ‘A’ students, 72.3% reported their health to be excellent or very good, and 4.9% reported fair or poor general health. The corresponding numbers for students with a GPA of ‘C’ or lower were 56.0% excellent/very good and 8.6% fair/poor.

Weight Status, Exercise, and Sleep

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 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.

BMI scores are fairly strongly correlated with but are not the same as fatness. The U.S. Centers for Disease Control and Prevention indicates “it is important to remember, however, that BMI is not a direct measure of body fatness and that BMI is calculated from an individual’s weight which includes both muscle and fat. As a result, some individuals may have a high BMI but not have a high percentage of body fat. For example, highly trained athletes may have a high BMI because of increased muscularity rather than increased body fatness“ (http://www.cdc.gov/nccdphp/dnpa/bmi/adult_BMI/about_adult_BMI.htm). For the same BMI score, females tend to have more body fat than males. Generally, older individuals have more body fat than younger individuals with the same BMI.

The results for these questions are presented in Table 3 along with the comparisons on each between males and females, white and Other race/ethnic group respondents, those living on- and those living off-campus, and among GPA categories. The table indicates that:

- † 26.2% of the respondents were overweight (21.5%) or obese (4.7%) based on BMI scores, while 4.8% were underweight;
- † Males were more likely to be overweight or obese than females were (30.2% of males were overweight or obese vs. 22.3% of females).
- † Respondents with lower GPAs were more likely to be overweight or obese than were their counterparts.

TABLE 3. % Distribution of Weight Status, Exercise, and Fruit and Vegetable Intake Among Respondents, by Background Characteristics

Health Problem	n	% Overall	GENDER		RACE		RESIDENCE		CUMULATIVE GPA			AGE				MEMBER FRAT/SOROR.	
			Female	Male	White	Other	On	Off	A	B	C/D/F	18-19	20-21	22-23	24 +	Yes	No
Weight Status																	
Obese	43	4.7	4.1	5.3*	3.6	7.4	5.5	3.9	3.1	5.1	9.6*	4.2	3.8	8.1	12.0	4.4	4.8
Overweight	198	21.5	18.2	24.9	20.9	23.0	22.6	20.4	18.1	23.0	28.7	21.2	19.8	26.3	32.0	24.8	20.7
Acceptable	637	69.1	71.6	66.4	70.6	65.2	66.3	71.6	72.9	67.7	58.5	69.7	71.8	59.6	56.0	66.4	69.7
Underweight	44	4.8	6.2	3.3	5.0	4.3	5.5	4.1	5.9	4.2	3.2	4.9	4.6	6.1	0.0	4.4	4.9
Participate in vigorous exercise for 20 minutes or moderate exercise for 30 minutes. . .																	
0 days per week	240	26.3	25.4	25.3	23.1	32.0***	28.4	23.2	24.2	23.7	37.2	26.6	24.0	28.0	29.2	18.8	26.6*
1-2 days per week	311	34.1	33.7	33.2	33.4	35.3	31.8	34.7	34.2	32.8	31.9	30.4	35.1	35.0	41.7	29.7	33.6
3-4 days per week	243	26.0	25.4	26.6	27.0	23.4	25.2	26.7	24.7	28.1	22.3	27.3	26.0	22.0	20.8	30.4	25.4
5 or more days per week	141	15.1	15.5	14.9	17.5	9.3	14.6	15.4	16.8	15.3	8.5	15.7	14.9	15.0	8.3	21.0	14.3
Do exercises to strengthen/tone muscles. . .																	
0 days per week	330	35.4	35.9	34.4	32.3	43.2**	36.4	34.6	34.2	33.4	45.7	33.7	37.0	31.3	60.0	27.5	36.5
1 day per week	157	16.9	17.0	16.9	16.4	18.0	17.5	16.3	15.9	19.6	9.6	18.2	14.8	18.2	16.0	16.7	16.8
2 or more days per week	444	47.7	47.1	48.8	51.3	38.7	46.1	49.1	49.9	47.0	44.7	48.1	48.2	50.5	24.0	55.8	46.7
Get enough sleep so feel rested when wake up in the morning . . .																	
< 4 days per week	386	43.0	42.8	43.2	39.6	51.3**	47.8	38.9*	40.5	44.1	44.9	48.0	39.2	36.7	45.5	41.5	42.9
4-5 days per week	318	35.5	35.0	36.1	36.3	33.3	33.0	37.7	33.8	37.6	34.8	33.8	38.4	32.7	31.8	33.1	36.1
6-7 days per week	192	21.5	22.2	20.8	24.1	15.3	19.1	23.4	25.7	18.3	20.2	18.3	22.4	30.6	22.7	25.4	20.9
Number of servings of fruits and vegetables eat per day																	
None	30	3.2	1.9	4.6***	3.0	3.4	3.0	3.4***	2.0	4.0	4.2*	3.4	3.0	4.0	0.0	1.4	3.6
1-2	537	57.4	50.5	64.4	56.3	60.4	48.9	65.0	51.7	62.3	55.8	52.4	60.3	66.0	64.0	58.7	56.7
3-4	294	31.4	39.3	23.1	31.2	31.7	37.4	26.0	35.8	27.2	33.7	35.3	30.1	22.0	20.0	34.1	31.2
5 or more	75	8.0	8.3	7.9	9.5	4.5	10.8	5.6	10.5	6.5	6.3	8.9	6.6	8.0	16.0	5.8	8.6

* $p(\chi^2) < .05$; ** $p(\chi^2) < .01$; *** $p(\chi^2) < .001$

- t 41.1% of respondents indicated that they exercised three or more days during the previous week (15.1% reported exercising five or more days the previous week). White respondents were more likely than Other race/ethnic group respondents to report exercising more often and less likely to report not exercising at all. Members of fraternities or sororities tended to report exercising more often than non-members.
- t 47.7% of the respondents did muscle strengthening or toning exercises two or more days in the previous week. White respondents and members of Greek organizations tended to report doing these types of exercises more often than their counterparts, but there were no significant differences among other groupings of respondents.
- t More than four out of ten respondents (43.0%) reported getting sufficient sleep **fewer than four days** out of the previous seven. White respondents and those living off-campus were more likely than Other race/ethnic respondents or on-campus residents to report more often getting sufficient sleep.
- t 8.0% of all respondents reported eating five or more servings of fruits and vegetables per day – the minimum recommended for good health by nutritionists – and 60.6% reported eating two or fewer servings per day.
 - t Females tended to report eating more fruits and vegetables than males did, but 91.7% of female respondents still fell short of the five per day recommendation.
 - t On-campus respondents tended to report eating more servings of fruits and vegetables than did off-campus respondents.
 - t Those with higher GPAs were somewhat more likely to report eating more daily servings of fruits and vegetables than their counterparts with lower GPAs.
- t There were no significant differences among respondents who were overweight, obese, or not overweight in their responses regarding participation in vigorous or moderate exercise, muscle strengthening or toning exercises, or regarding consumption of fruits and vegetables.
- t The questionnaire included several questions regarding how respondents perceive their own weight status, what they were currently trying to do about their weight, and if they had used any of several behaviors in the previous 30 days to lose weight. 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:

TABLE 4. % Distribution of Perceived Weight Status, Diet and Exercise Behavior, by BMI-Based Weight Status

ITEM	% Overall	BMI-Based Weight Status			
		Underweight	Acceptable	Overweight	Obese
How describe own weight ***					
Very underweight	1.0	9.1	0.8	0.0	0.0
Slightly underweight	14.7	72.7	15.9	0.0	2.4
About the right weight	53.0	18.2	69.1	21.2	0.0
Slightly overweight	29.2	0.0	14.2	77.3	58.5
Very overweight	<u>2.1</u>	<u>0.0</u>	<u>0.0</u>	<u>1.5</u>	<u>39.0</u>
	100.0	100.0	100.0	100.0	100.0
Currently trying to . . . ***					
Doing nothing about weight	19.3	34.9	23.1	6.5	2.4
Stay the same weight	22.8	20.9	27.3	12.1	9.5
Lose weight	48.8	4.7	39.7	79.9	85.7
Gain weight	<u>9.1</u>	<u>39.5</u>	<u>9.9</u>	<u>1.5</u>	<u>2.4</u>
	100.0	100.0	100.0	100.0	100.0
Within last 30 days, did . . .					
Exercise to lose weight***	53.3	13.6	46.6	79.8	81.4
Diet to lose weight***	34.8	6.8	28.3	58.6	58.1
Vomit or take laxatives to lose weight	2.9	2.3	3.1	3.5	0.0
Take diet pills to lose weight*	2.6	0.0	1.9	3.5	9.3
None of the above***	40.9	81.8	48.8	13.6	11.6

* $p(\chi^2) < .05$; ** $p(\chi^2) < .01$; *** $p(\chi^2) < .001$

- t 14.2% of those in the ‘Acceptable’ category described themselves as slightly overweight.
- t 21.2% of those who were overweight and 2.4% of those who were obese described themselves as about the right weight or slightly underweight; 39.0% of those who were categorized as obese described themselves as very overweight.

Males and females differed in their perceptions of their weight status even controlling for their actual weight status based on BMI. In each of the four BMI weight status categories, females were more likely than males to judge their weight status as being the next higher category than they actually are.

- t Overall, 48.8% of respondents said they were trying to lose weight.
- t 79.9% of those classified as overweight and 85.7% of those classified as obese said they were trying to lose weight, as were 39.7% of those in the ‘Acceptable’ category and 4.7% of those in the ‘Underweight’ category.

Disease Prevention and Screening

The questionnaire asked respondents to indicate whether or not they had been vaccinated against various diseases and whether 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. Table 6 shows the percentage of all respondents who said that they had done each of these and the percentage who indicated not knowing.¹ The table also compares the percentage of

TABLE 5. % of Respondents Who Wore Protective Equipment to Prevent Injury During Last School Year (Of Those Engaging in the Activity)

Within last school year, how often did you . . .	n	Never	Rarely	Sometimes	Most of the Time	Always
Wear a seatbelt when rode in a car	936	0.1	0.3	1.6	14.8	83.2
Wear a helmet when rode a bicycle	539	52.3	13.0	9.5	12.4	12.8
Wear a helmet when rode a motorcycle	88	3.8	6.3	2.8	7.9	79.1
Wear a helmet when in-line skating	210	72.8	7.5	6.3	7.0	6.4

respondents who said they had done each of these across various demographic groups of respondents, i.e., males vs. females, white and other students, respondents living on-campus vs. those living off-campus, and respondents reporting their cumulative GPA is an ‘A,’ a ‘B,’ or a ‘C’ or lower. The table indicates that:

- t Over 76.8% of respondents claimed to have been vaccinated against hepatitis B. Between 44% and 70% of respondents claimed to have been vaccinated against varicella and meningococcal disease. Eight out of ten respondents (80.1%) said they were vaccinated against measles, mumps and rubella, while 23.7% claimed to be vaccinated against influenza last year.
- t More than eight out of ten (85.3%) claimed to have had a dental checkup and

¹ 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.

cleaning in the past year and nine out of ten (89.3%) claimed to have had their blood pressure checked in the past two years.

- t Four out of ten (40.5%) males claimed to perform monthly testicular exams.
- t Nearly six out of ten females (58.3%) said they had a gynecological exam in the past year but 39.9% said they perform monthly breast self-exams.
- t More than four out of ten respondents (42.2%) claimed to have had their cholesterol checked in the past five years.
- t One in seven (14.0%) reported using sunscreen daily.
- t Females were somewhat more likely than males to report having had their blood pressure checked and to use sunscreen daily.
- t White respondents were more likely than other respondents to report having had a dental exam last year, to perform testicular exams monthly, and use sunscreen daily, but were less likely to report having been vaccinated against varicella or influenza.
- t Respondents living on-campus were somewhat more likely than their off-campus counterparts to report having been vaccinated against meningococcal disease, and more likely to report having had a recent dental checkup, but less likely to use sunscreen daily; female respondents living off-campus were more likely than their on-campus counterparts to report having had a gynecological exam in the past year.
- t There were significant differences across age groups of respondents regarding vaccinations for hepatitis B and meningococcal disease, having dental exams and gynecological exams. For the most part, younger respondents were more likely than older respondents to have been vaccinated for hepatitis B and for meningococcal disease and to have had a dental exam and cleaning in the last year, while older female respondents were more likely than younger female respondents to have had a gynecological exam in the last year.
- t There were few differences on these disease prevention or screening behaviors among respondents with different GPAs or between members and non-members of fraternities/sororities.

TABLE 6. % of Respondents Who Report Having Done Various Disease Prevention or Early Detection Procedures, by Background

Prevention/Early Detection Step	%	% Don't Know	% Who Answered Yes														
			<u>GENDER</u>		<u>RACE</u>		<u>RESIDENCE</u>		<u>CUMULATIVE GPA</u>			<u>AGE</u>			<u>MEMBER FRAT/SOROR.</u>		
	Yes		Female	Male	White	Other	On	Off	A	B	C/D/F	18-19	20-21	22-23	24 +	Yes	No
Vaccinated vs. hepatitis B	76.8	16.6	78.1	75.2	77.2	75.7	77.2	76.5	77.9	76.3	72.3	79.1	76.0	77.0	52.0***	77.7	76.2
Vaccinated vs. meningococcal	69.9	12.0	69.9	69.4	73.8	60.0	78.4	62.6***	71.4	69.5	64.5	80.4	63.9	60.6	28.0***	71.0	69.6
Vaccinated vs. varicella	44.4	10.9	42.3	46.1	39.8	55.8***	43.3	45.3	39.2	46.3	57.0	41.5	46.4	45.5	50.0	41.9	44.5
Vaccinated vs. measles, mumps, rubella	80.1	13.5	80.5	79.9	80.3	79.3	76.8	82.9	81.4	78.2	85.1*	76.0	82.2	90.0	72.0	79.7	80.1
Vaccinated vs. flu in last year	23.7	7.8	20.2	27.7	23.0	25.4*	28.2	19.6	20.7	25.6	27.7	27.1	19.0	25.0	34.6	21.9	24.1
Dental exam/cleaning in last year	85.3	1.6	87.4	83.3	88.9	76.1***	88.7	82.5*	86.7	85.6	79.8	89.1	84.8	74.0	68.0***	89.1	84.4
Do testicular exam monthly (males)	40.5	2.6	0.0	40.6	44.9	29.3**	40.3	40.7	4.1	42.6	36.0*	43.4	37.9	42.6	20.0	38.4	41.6
Do breast exam monthly (females)	39.9	0.7	39.1	0.0	41.2	37.0	35.7	43.0	39.9	38.2	42.2	38.5	40.3	34.8	70.0*	41.5	38.9
Had Gyn. exam in last year (females)	58.3	0.6	58.5	0.0	61.6	50.0	41.7	70.8***	58.8	56.6	66.7	43.4	37.9	42.6	20.0	38.4	41.6
Had BP checked in last 2 years	89.3	2.7	91.7	86.8*	83.4	82.0***	89.7	89.2	89.8	89.3	86.2	91.5	88.4	82.2	92.3	93.4	88.4*
Had cholesterol checked in last 5 years	42.2	14.4	39.2	45.3	41.8	43.3	43.9	40.8	41.5	43.5	35.1	42.1	41.3	42.0	60.0	48.9	40.9
Used sunscreen daily	14.0	1.5	21.4	6.4***	15.9	9.0*	10.8	16.7*	13.6	15.3	9.6	11.4	16.7	17.0	4.0	15.9	13.9

* $p(\chi^2) < .05$; ** $p(\chi^2) < .01$; *** $p(\chi^2) < .001$

Alcohol, Tobacco, and Other Drugs

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 ten different categories of substances over the previous 30 days. Table 7 shows the percentage distribution of responses for each of these ten categories of substances. The table indicates that:

- † Seven out of ten (69.5%) of the respondents reported never having smoked cigarettes at all and another 14.3% reported not having smoked in the previous 30 days (i.e., 83.8% reported not smoking in the previous 30 days); 7.0% of respondents claimed to have smoked cigarettes 6 or more days out of the previous 30.
- † More than seven out of ten respondents (71.7%) said they had never smoked cigars and 92.6% said they have never used smokeless tobacco; 1.7% of respondents claimed to have used smokeless tobacco in the previous 30 days, while 6.8% claimed to have smoked cigars.
- † By contrast, 15.2% claimed never to have drunk alcohol and another 11.9% claimed not to have drunk alcohol in the previous 30 days. More than a third (34.6%) claimed to have drunk alcohol on six or more of the previous 30 days.
- † 62.2% claimed never to have used marijuana, and another 19.7% reported not having used it in the previous month; 6.3% reported having used it on six or more days in the previous month.
- † 97.2% of respondents claimed to have never used cocaine, 99.4% claimed to have never used Rohypnol, 94.6% claimed to have never used amphetamines, 97.4% claimed to have never used Ecstasy, and 93.2% claimed to have never used other drugs than those listed.

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 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 cigars and having used smokeless tobacco, but did not differ from females with respect to drinking alcohol at least once in the month, smoking marijuana, or using any of the other drugs listed.
- † White respondents were more likely to report smoking cigarettes, drinking alcohol, and smoking marijuana than other respondents as a group.

TABLE 7. % of Respondents Having Used Various Kinds of Drugs, Alcohol and Tobacco in the Past 30 Days

In past 30 days, on how many days did you use:	n	Never	Not in Past Month	1-2 Days	3-5 Days	6 or More Days
Cigarettes	938	69.5	14.3	7.6	1.6	7.0
Cigars	932	71.7	21.4	5.2	0.9	0.7
Smokeless tobacco	927	92.6	5.6	0.6	0.4	0.7
Alcohol (beer, wine, liquor)	939	15.2	11.9	16.5	21.8	34.6
Marijuana	939	62.2	19.7	8.0	3.3	6.3
Cocaine	937	97.2	2.2	0.6	0.0	0.0
Amphetamines	938	94.6	2.8	1.0	0.4	1.2
Rohypnol	937	99.4	0.5	1.0	0.0	0.0
Ecstasy	936	97.4	2.4	0.2	0.0	0.0
Other drugs	932	93.2	4.5	1.2	0.7	0.4

TABLE 8. % of Respondents Using Various Drugs, Alcohol or Tobacco in Past 30 Days, by Background

Substance	% Who Answered 1 or More Days																
	% 1-2 Days	% 3 or More Days	<u>GENDER</u>		<u>RACE</u>		<u>RESIDENCE</u>		<u>CUMULATIVE GPA</u>			<u>AGE</u>			<u>FRAT/SOROR.</u>		
			Female	Male	White	Other	On	Off	A	B	C/D/F	18-19	20-21	22-23	24 +	Member	Non Member
Cigarettes	7.6	8.6	15.7	16.0	17.9	12.1*	10.8	20.9***	15.9	16.0	12.8	12.3	18.5	18.8	28.0*	18.8	15.1
Cigars	5.2	1.6	2.4	10.9***	7.7	4.9	7.1	6.6	5.9	6.8	7.4	8.0	5.9	3.0	11.5	9.6	6.2
Smokeless tobacco	0.6	1.1	0.4	2.9**	1.5	1.8	1.6	1.8	1.3	1.4	1.1	1.7	1.8	1.0	4.2	1.5	1.7
Alcohol (beer, wine, liquor)	16.5	56.4	73.3	72.0	78.7	59.0***	62.8	81.7***	72.6	74.7	69.1	67.0	75.9	84.0	72.0**	94.2	68.9***
Marijuana	8.0	9.6	16.6	18.7	19.7	12.8*	14.9	19.9*	17.6	16.7	21.3	17.4	18.0	15.8	16.0	27.0	15.7***
Cocaine	0.6	0.0	0.2	1.1	0.9	0.0	0.2	1.0	0.5	0.7	1.1	0.2	1.3	0.0	0.0	0.7	0.7
Amphetamines	1.0	1.5	1.9	3.1	2.3	3.3	1.8	3.2	2.8	1.6	5.3	1.0	3.8	5.0	0.0*	3.6	3.2
Rohypnol	0.1	0.0	0.0	0.2	0.2	0.0	0.2	0.0	0.3	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.1
Ecstasy	1.2	1.1	0.2	0.2	0.2	0.4	0.0	0.4	0.0	0.5	0.0	0.0	0.5	0.0	0.0	0.0	0.3
Other drugs	0.2	0.0	1.9	2.5	2.3	2.2	1.6	2.9	1.8	2.4	3.2	1.7	3.1	1.0	0.0	3.8	1.9

* $p(\chi^2) < .05$; ** $p(\chi^2) < .01$; *** $p(\chi^2) < .001$

- † Those living off-campus were more likely than their on-campus counterparts to smoke cigarettes, to have drunk alcohol in the previous 30 days, and to report having smoked marijuana at least once in the previous month.
- † Respondents with different cumulative GPAs did not differ significantly in the minimal use of any of these substances.
- † Older respondents were somewhat more likely to report smoking cigarettes and drinking alcohol, while those in their early 20's were somewhat more likely than others younger or older to report using amphetamines.
- † Members of Greek organizations were more likely than non-members to report smoking marijuana and drinking alcohol at least once in the previous month.

Respondents were also asked to indicate whether they thought the ‘typical’ student at Michigan had, in the previous month, used one or more 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 shows 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:

- † Respondents, on all types of substances, tended to believe ‘typical’ students were more likely to be more frequent users than they were personally.
- † While 16.2% of respondents reported smoking cigarettes in the past month, the average estimate among respondents was that 85.9% of their fellow students smoked in the previous month.
- † While 0.3% of respondents reported drinking alcohol daily in the previous month, respondents believed that 28.4% of their fellow students drank daily in the previous 30 days.
- † While almost none of the respondents reported using Rohypnol, Ecstasy, or cocaine at all in the previous month, 19.8%, 28.6% and 27.9% of respondents respectively believed that their fellow students used these drugs in the previous month.
- † Non-users and those who had not used substances in the past month were more likely than users to over-estimate typical use.
 - † For example, 83.9% of non-users over-estimated cigarette usage among peers, 83.9% over-estimated marijuana usage, and 94.0% over-estimated alcohol usage.
 - † But a substantial portion of some users also over-estimated use among peers:

TABLE 9. % of Respondents Having Used Various Kinds of Drugs, Alcohol and Tobacco in the Past 30 Days and % Believing Typical Students Used Various Kinds of Drugs, Alcohol and Tobacco in Past 30 Days

	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	1 or More Days	Daily	Never, Not in Past 30	1 or More Days	Daily	
Cigarettes	83.8	14.6	1.6	14.1	60.9	25.0	73.0
Cigars	93.1	6.9	0.0	46.5	51.7	1.7	49.4
Smokeless tobacco	98.3	1.6	0.1	58.4	38.0	3.6	40.5
Alcohol (beer, wine, liquor)	27.1	72.7	0.3	1.8	69.8	28.4	45.1
Marijuana	82.4	16.6	1.1	14.3	70.9	14.8	72.2
Cocaine	99.4	0.6	0.0	72.1	26.5	1.3	27.6
Amphetamines	97.4	2.4	0.1	62.7	33.5	3.8	35.7
Rohypnol, GHB or Liquid X	99.9	0.1	0.0	80.2	18.7	1.1	19.7
Other drugs	97.7	2.0	0.3	56.4	41.2	2.3	42.1
Ecstasy	99.8	0.2	0.0	71.4	27.2	1.4	28.6

TABLE 9A. 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

Demographic Group	Mean							
	Number Of Drinks		Hours Drinking		BAC		Number Times Drank 5+	
All respondents	4.35		2.79		.073		2.22	
Respondents who drank	5.32		3.38		.089		2.47	
	Drinkers		Drinkers		Drinkers		Drinkers	
	All	Only	All	Only	All	Only	All	Only
Gender								
Males	5.13***	6.44***	2.92	3.60**	.070	.088	2.51***	2.87***
Females	3.62	4.32	2.68	3.20	.076	.091	1.94	2.12
Race								
White	4.75***	5.58***	3.02***	3.51**	.080***	.093***	2.37***	2.59**
Other race/ethnic	3.37	4.58	2.22	3.01	.055	.076	1.85	2.15
Age								
18-19	4.28	5.70*	2.54**	3.37	.075	.100***	2.20**	2.60**
20-21	4.30	5.01	2.91	3.34	.073	.085	2.14	2.31
22-23	5.04	5.46	3.36	3.64	.071	.085	2.75	2.88
24 or older	3.74	4.26	2.96	3.38	.045	.052	1.54	1.61
Residence								
On-campus	3.84***	5.34	2.28***	3.17*	.067**	.092	1.98***	2.36
Off-campus	4.79	5.30	3.22	3.53	.079	.087	2.42	2.55
GPA								
A	4.44	5.42	2.79	3.41	.074	.090*	2.28	2.57
B	4.44	5.41	2.90	3.47	.076	.093	2.24	2.49
C or less	4.03	4.87	2.56	3.09	.059	.072	1.97	2.12
Member of Fraternity or Sorority								
YES	6.27***	6.30***	3.89***	3.80*	.104***	.105**	3.54***	3.53***
NO	4.03	5.12	2.61	3.31	.067	.086	1.98	2.24

* p(F) < .05; ** p(F) < .01; *** p(F) < .001

t Among those who reported drinking the last time they ‘partied,’ males reported drinking an average of 6.4 drinks and females 4.3 drinks the last time they ‘partied,’ but the estimated Blood Alcohol Content (BAC) for males was .088 while it was .091 for females.

- t The average levels of consumption and BAC varied by race/ethnicity with white respondents reporting more drinks consumed and having higher BAC levels than Other race/ethnic group respondents; white respondents also reported longer times drinking and more times when they drank five or more drinks in that past two weeks than did Other race/ethnic group respondents.
- t In general, younger respondents tended to report consuming more drinks on average and had higher BAC levels than older respondents.
- t There were no significant differences in either the average number of drinks reported or BAC levels between those living on- or off-campus, nor were there differences in the average numbers of drinks consumed among respondents with different GPAs; however, those with GPAs below a 'B' had lower BAC levels than those with an 'A' or 'B.'
- t Members of fraternities or sororities reported drinking more drinks (6.3) than non-member respondents (5.1) and had BAC levels that were significantly higher (.105 vs. .086) than non-members.

The numbers of drinks reported is a reasonably close but imperfect proxy for BAC since BAC takes into account the individual's body mass and the duration over which the drinks were consumed. For example, in this sample, 87.4% of those who reported drinking eight or more drinks had calculated BAC of 0.10 or greater, compared to 49.8% of those who reported drinking 5-7 drinks, and 6.2% of those who reported drinking 1-4 drinks.

The questionnaire asked respondents to indicate how many times in the previous two weeks they had drunk the same amount of alcohol or more as they had indicated they consumed the last time they 'partied.'

- t 37.1% of the respondents reported that there were two or more occasions when they drank a comparable number of drinks or more in the two weeks prior to completing the survey. However,
 - t Of those who reported drinking no alcohol the last time they partied, almost all (98.8%) reported that there were no occasions when they drank more than that (i.e., more than none) in the previous two weeks.
 - t Of those who reported drinking one to four drinks, 35.6% reported there were no occasions and 31.2% reported there was one occasion when they drank that much or more (while 33.2% reported two or more occasions when they drank that much or more).
 - t Among those who reported drinking five to seven drinks, 21.4% reported

there were no occasions and 25.9% reported there was one occasion when they drank that much or more in the past two weeks, while 52.7% reported two or more occasions when they drank that much or more.

- † Among those who reported drinking eight or more drinks, 19.7% said there were no occasions and 20.2% said there was one occasion when they drank that much or more, while 60.1% reported there were two or more occasions when they drank that much or more in the previous two weeks.

Respondents were also asked to indicate how many alcoholic drinks they thought the ‘typical’ Michigan student had the last time he/she partied.

- † More than 83% of the respondents thought that the ‘typical’ student at the University of Michigan drank four or more alcoholic drinks the last time he/she ‘partied.’ The average number of drinks respondents believed the ‘typical’ student drank was 5.05 (standard deviation = 2.08) and 18.8% of the respondents thought the ‘typical’ student drank between seven and 20 drinks the last time he/she partied.
- † 56.5% of the respondents perceived that the ‘typical’ student at Michigan consumed more drinks than they did personally, and, using 5 as the average for all students,² 34.8% of the respondents guessed that the ‘typical’ student drinks more than the average actually is.
- † Those groups of respondents who tend to have lower drinking rates were more likely to believe that the ‘typical’ student drinks more than they do personally but those groups that tend to drink more also tended to over-estimate the number of drinks the ‘typical’ student drinks based on the actual average. That is, compared to their counterparts, females, Other race/ethnic group respondents, older respondents and those who are not members of fraternities or sororities tended to believe that the ‘typical’ student drank more than they did personally and this was generally accurate. On the other hand, compared to their counterparts, males, white respondents, off-campus respondents, and members of fraternities or sororities tended to guess the ‘typical’ student drinks more than the average actually is.

The questionnaire asked respondents how many times in the previous two weeks they had drunk five or more alcoholic drinks at a sitting. The survey found that:

- † Almost half (44.5%) of all respondents (52.4% of those who have ever drunk alcohol) claimed to have had five or more alcoholic drinks at a sitting at least

² The mean number of drinks reported among all students the last time they partied or socialized was 4.4 and the mean number of drinks reported among those who actually drank alcohol the last time they partied or socialized was 5.3. Since the questionnaire only allowed for discrete quantities such as 5 or 6, setting the cut-point at ‘greater than 5’ as we have done here ensures that the respondent’s estimate is greater than the actual average of those who drank.

once in the previous two weeks with 6.7% of respondents claiming to have done it five or more times.

The questionnaire also included a series of questions regarding how often the respondent used protective strategies, 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. Table 10 shows the percentages of respondents who reported doing each of ten different strategies either always, usually, sometimes, rarely, or never. The table indicates that:

- † 19.6% of respondents reported they at least sometimes (i.e., 'sometimes,' 'usually,' or 'always') drink an alcohol look-alike beverage and 57.3% reported they 'always' use a designated driver.
- † Nearly all respondents indicated that they at least occasionally eat food before or while drinking and 76.1% claimed to either 'usually' or 'always' do this.
- † 66.0% said they 'usually' or 'always' keep track of how many drinks they are having and 29.4%% claimed they 'usually' or 'always' avoid drinking games.
- † 56.1% said they sometimes (i.e., 'sometimes,' 'usually,' or 'always') alternate non-alcoholic with alcoholic beverages and 57.31% at least sometimes determine in advance the maximum number of drinks they will drink; 40.1% said they at least sometimes have a friend let them know when they have had enough and 41.1% said they at least sometimes pace their drinking.
- † Among those who at least occasionally drink, 7.7% reported not 'usually' or 'always' doing any of the ten protective strategies listed; 92.3% gave the 'always' or 'usually' response to at least one of the ten items, 79.7% to two or more of the items, 61.7% to three or more of the items, and 44.0% to four or more of the items. Since one of the items -- use a designated driver -- is intended to protect the drinker from an auto injury rather than from the effects of too much alcohol itself, then we have re-calculated the percentages of respondents who use various numbers of these protective strategies excluding the designated driver item from the list. Not including that item, among those who drink, 11.1% reported not 'always' or 'usually' using any of the remaining nine protective strategies, 88.9% reported 'usually' or 'always' using one or more of the strategies, 68.9% two or more of the strategies, 49.3% three or more of the strategies, 32.8% four or more of the strategies. Females and older respondents reported 'usually' or 'always' using more of these protective strategies than did their counterparts.

Table 11 compares the responses to these based on gender, race, age, residence location, GPA, and membership in Greek organizations. Table 11 shows the percentage of respondents who said they always or usually use the various protective strategies. Table 11 indicates that:

TABLE 10. % Distribution of How Often Respondents Who Partied Used Protective Strategies

During the last school year, if you partied, how often	Always	Usually	Sometimes	Rarely	Never	n
Alternated non-alcoholic with alcoholic beverages	7.7	21.3	27.1	27.5	16.4	759
Determined in advance not to exceed a set number drinks	14.0	20.7	22.6	20.7	21.2	760
Chose not to drink alcohol	5.4	15.8	48.1	20.4	10.2	802
Used a designated driver	57.3	15.3	10.3	4.0	13.0	708
Ate before/during drinking	33.9	42.2	20.3	2.8	0.8	762
Have friend let you know when you've had enough	11.2	12.2	16.7	22.6	37.4	757
Kept track of how many drinks were having	34.0	32.0	15.9	11.1	7.0	768
Paced drinks to 1 or fewer per hour	9.4	12.0	19.7	31.3	27.6	767
Avoided drinking games	15.4	14.0	22.4	24.1	24.1	771
Drank an alcohol look-alike	1.3	3.7	14.6	17.2	63.2	775

TABLE 11. % of Respondents Who Partied Who Always or Usually Used Protective Strategies, by Background Characteristics

During the last school year, if you partied, how often did you	A Alternate Alc. & Non-Alc. Drinks	B Determine Drink Limit Ahead	C Choose Not to Drink	D Use Designated Driver	E Ate Before/ During Drinking	F Have Friend Tell When Had Enough	G Track How Many Drinks	H Paced Drinks ≤ 1 Per Hour	I Avoid Drinking Games	J Drank Alcohol Look-a-likes
Gender										
Females	32.8*	40.5**	24.1*	77.7**	78.2	27.1**	74.0***	28.2***	31.7	5.8
Males	24.7	30.7	18.3	67.2	73.1	18.9	58.0	14.1	26.3	4.1
Race										
White	26.7*	34.3	19.1	72.6	75.9	20.5***	65.1	18.0***	25.0***	3.5***
Other	35.8	39.2	27.0*	72.9	76.3	31.6	68.7	31.0	41.8	9.5
Age										
18-19	31.6	37.7	22.1	70.4	75.2	26.1	67.3	15.3***	26.0***	5.1
20-21	29.6	34.8	23.1	74.7	75.1	19.5	66.3	24.1	28.7	5.3
22-23	19.1	27.8	12.9	69.8	78.0	27.3	62.0	26.1	34.4	4.3
24 or older	18.2	50.0	18.2	77.3	90.9	22.7	63.6	45.5	63.6	4.5
Residence										
On-campus	32.8	41.5**	26.8*	73.0	72.6	25.2	70.3*	20.6	31.5	6.8
Off-campus	26.4	31.4	17.1	72.3	78.6	21.9	63.0	21.9	27.9	3.7
GPA										
A	28.9	33.9	20.9	73.5	74.8	21.7	67.9	22.1	31.0	5.8
B	26.2	35.2	20.7	71.6	76.2	25.1	65.2	19.3	25.1	4.6
C or less	38.5	43.0	23.5	74.0	76.3	19.0	65.0	26.3	37.5	2.5
Member of Fraternity or Sorority										
YES	25.2	29.6	13.2**	67.7	79.4	22.4	58.1*	13.3**	14.0***	5.1
NO	29.9	37.3	23.3	73.8	75.2	23.6	68.2	23.6	32.8	5.0

* $p(\chi^2) < .05$; ** $p(\chi^2) < .01$; *** $p(\chi^2) < .001$

TABLE 12. % of Respondents Who Drink Who Report Experiencing Various Health Threatening Consequences of Their Drinking Within the Last School Year, Overall and by Background Characteristics

Within the last school year, have you experienced . . . as a consequence of your drinking?	Injured Self	Injured Other	Involved in Fight	Did, later Regretted	Forgot Where, What	Forced Sex	Unprotected Sex
Overall (as % of all respondents)	24.5 (19.5)	4.6 (3.7)	6.7 (5.3)	41.7 (33.8)	38.7 (31.1)	1.2 (0.9)	10.6 (8.5)
Gender							
Females	24.2	2.6*	4.7*	41.7	34.6*	1.3	9.6
Males	24.7	6.5	8.8	41.4	43.1	1.1	11.4
Race							
White	25.7	4.6	8.0**	44.0*	41.4*	1.6	11.6
Other	20.7	4.3	2.7	35.1	31.0	0.0	8.1
Age							
18-19	23.8	4.3	5.9	45.7	44.1*	1.0	8.2***
20-21	24.7	4.3	7.1	40.2	35.9	0.9	8.3
22-23	27.2	6.5	7.6	38.0	32.6	2.2	22.8
24 or older	19.0	4.8	4.8	19.0	25.0	0.0	19.0
Residence							
On-campus	21.1	4.2	5.2	41.0	38.5	1.0	7.1*
Off-campus	26.8	4.8	7.7	42.4	38.9	1.1	13.0
GPA							
A	26.9	5.1	7.1	42.1	41.7	1.6*	10.0
B	23.7	3.5	7.0	41.6	38.3	0.3	9.6
C or less	19.7	6.6	3.9	39.5	27.6	3.9	18.4
Member of Fraternity or Sorority							
YES	36.0***	7.4	14.1***	55.9***	53.4***	1.5	12.6
NO	21.4	3.8	5.0	38.1	35.1	1.2	10.1

* $p(\chi^2) < .05$; ** $p(\chi^2) < .01$; *** $p(\chi^2) < .001$

their drinking; and nine out of ten (89.4%) reported never having had unprotected sex as a consequence of their drinking.

- † Females were more likely than males to report never having injured another person, never having been in a fight, and never having drunk to the point where

they did not know where they were or what they had done.

- † Other race/ethnic respondents were more likely than white respondents to report not being involved in a fight, never having done something they later regretted, and never having drunk so much they did not know where they were or what they had done.
- † Older respondents who drink were more likely than their younger counterparts to report never drinking to the point where they did not know where they were or what they did, but younger respondents were more likely to report never having had unprotected sex.
- † On-campus respondents were more likely than their off-campus counterparts to report never having had unprotected sex as a result of drinking.
- † Non-members of Greek organizations were more likely than members to report never having injured themselves, not being involved in a fight, never having done something they later regretted, and never having drunk to the point where they did not know where they were or what they had done.

Roughly half (47.3%) of the students who drink reported doing none of these things this academic year as a result of their drinking, 17.1% reported doing one, 15.7% reported doing two, 12.5% reported doing three, and 7.6% reported doing four or more.

Figure 1 shows the percentage of respondents who reported experiencing at least one of these undesirable events compared to the number of drinks they reported drinking the last time they partied or socialized. Assuming that the amount they drank the last time was relatively typical for them, then the figure clearly indicates that the risk of experiencing at least one of these undesirable events increases directly with the amount typically consumed. The figure also indicates that drinking four or more alcoholic drinks (six or more for males) increases the risk to more than 50% and drinking more than nine makes the likelihood almost certain (more than nine for females and more than thirteen for males).

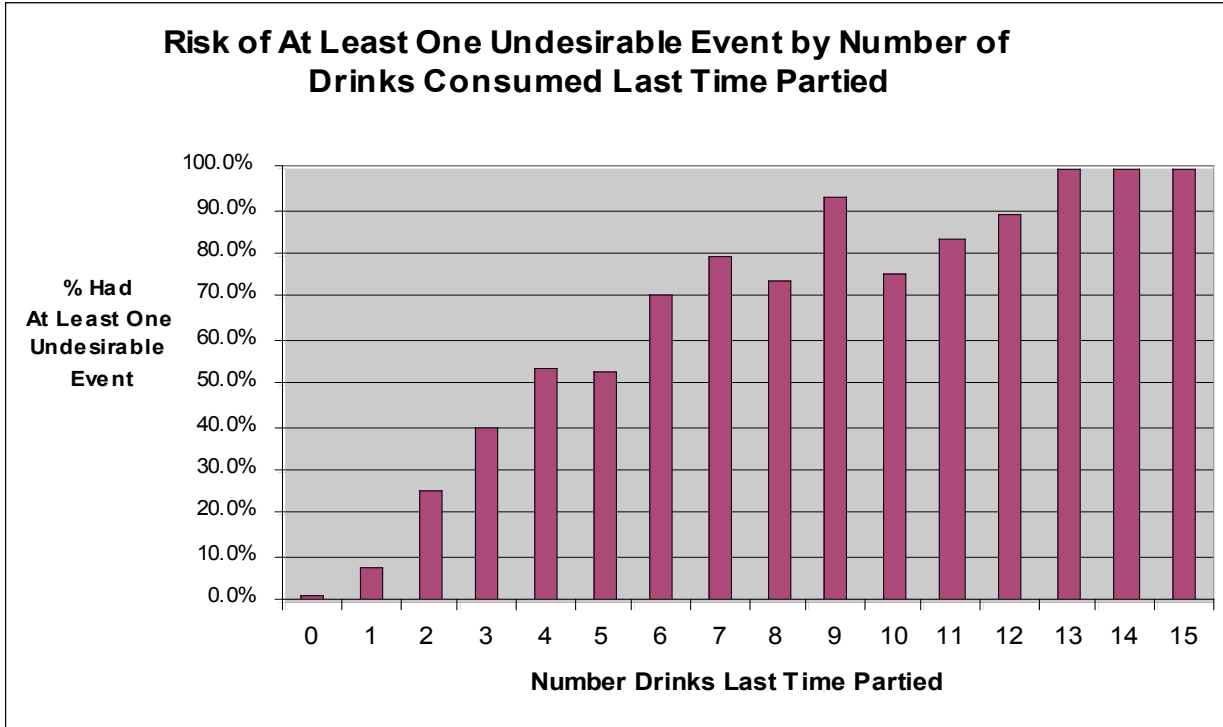


Figure 1

Sexual Behavior and Beliefs

The questionnaire also included another series of questions regarding sexual behaviors, steps to prevent conception and sexually transmitted diseases, and perceptions of these behaviors by a ‘typical’ student at Michigan. Table 13 shows the percentage distribution of the number of different partners, if any, respondents reported having sex with (oral, vaginal, or anal) during the last school year. The table indicates that:

- ⌘ More than a third of respondents (35.7%) reported having no sexual partners during the last school year and 41.3% reported a single partner.
- ⌘ 8.6% of respondents reported having had four or more sexual partners during the past school year.

Table 13 also shows the percentage distribution regarding the number of sex partners respondents believed the ‘typical’ student had at Michigan. The table indicates that respondents overwhelmingly misperceive what is, in fact, typical. The table indicates that:

- ⌘ 23.6% of respondents believed the ‘typical’ student had four or more sex partners.

TABLE 13. % of Respondents Involved in Various Sexual Behaviors and Perceptions of These in ‘Typical’ UM Student

Behavior	<u>% Within Last School Year</u> Self	<u>‘Typical’ Student</u>	% Perceive Typical > Self
In last school year, number of partners with whom had sex (oral, vaginal, or anal)			
0	35.7	1.4	
1	41.3	13.4	
2	7.6	33.3	
3	6.6	28.2	
4	3.9	9.5	
5 or More	4.7	14.1	
	Mean=1.26 sd=1.847	Mean=3.01 sd=3.57	80.8 ^z

^z This is the percentage of respondents who believe the ‘typical’ student had more sexual partners than the respondent did. The percentage of respondents who believe that the ‘typical’ student had more sexual partners than the average number (1.26) or the modal number (1.0) actually reported is 85.2%.

- † 14.8 % of respondents believed that the ‘typical’ student had one or fewer sex partners.
- † Comparing the respondent’s belief about the ‘typical’ student’s number of partners to his or her own, the table indicates that 80.8% of the respondents believed that the ‘typical’ student had more sexual partners than the respondent did himself or herself.
- † Based on the fact that the ‘typical’ student actually had an average of 1.26 partners or less, 85.2% of respondents over-estimated what is ‘typical’ (i.e., guessed a number of partners that is greater than the actual average).

The questionnaire asked respondents to indicate how many times in the previous 30 days they had engaged in each oral sex, vaginal sex, and anal sex. They were then asked to respond to a similar question about the ‘typical’ Michigan student. Table 14 shows the percentage distribution of responses for each of these. The table indicates that:

TABLE 14. Number of Times Respondents Report Having Sex, Overall and Using Condoms, in Last 30 Days, by Type

During the last 30 days, number of times you had ___ Sex	Overall			'Typical Student'		
	Oral Sex	Vaginal Sex	Anal Sex	Oral Sex	Vaginal Sex	Anal Sex
OVERALL						
Never	31.1	42.6	82.1	--	--	--
Not in Last 30 days	25.3	18.4	15.2	4.8	4.8	50.8
1-2 Times	18.1	7.8	1.8	36.8	37.7	41.2
3-4 Times	10.1	6.0	0.5	31.9	28.7	5.8
5-6 Times	5.1	5.0	0.4	15.8	15.8	1.3
7-8	4.1	5.0	0.0	5.9	6.5	0.6
9 or More Times	<u>6.3</u>	<u>15.2</u>	<u>0.1</u>	<u>4.7</u>	<u>6.5</u>	<u>0.6</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
% Over-Estimating Typical Compared to Self	69.9	68.6	69.9			
Used a condom during. . .						
Never done this	32.6	43.5	80.0	2.3	1.5	29.3
Not in past 30 days	22.3	16.9	13.8	--	--	--
Never Used Condom	43.0	9.8	3.3	45.2	0.3	8.8
Rarely Used Condom	1.1	3.1	0.4	38.2	1.7	12.5
Sometimes	0.5	2.7	0.7	8.9	19.6	22.8
Mostly	0.1	6.2	0.5	5.2	71.2	25.3
Always	<u>0.4</u>	<u>17.8</u>	<u>1.2</u>	<u>0.2</u>	<u>5.8</u>	<u>5.4</u>
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
% Over-Estimating Typical Compared to Self (Of those doing in past 30 days) n=	39.2	37.4	36.3			
Used a condom the last time you had. . .						
(Of those who have done this) n = 637	2.8	60.9	33.0			
		515	121			

* $p(\chi^2) < .05$; ** $p(\chi^2) < .01$; *** $p(\chi^2) < .001$

† Anal sex is relatively rare: 82.1% of respondents reported never having done this and another 15.2% reported not having done it in the previous 30 days; nearly half (49.2%) of respondents believed that the 'typical' Michigan student had done this at least once in the previous month.

† Oral sex is somewhat more common than vaginal sex with 43.6% of respondents reporting having engaged in oral sex at least once in the past month compared to 39.0% for vaginal sex, but those engaging in vaginal sex reported having done it more times.

- 69.9% of respondents believed that the ‘typical’ Michigan student had oral sex a greater number of times than the respondent did personally.
- 95.2% of respondents believed the ‘typical’ Michigan student had vaginal sex at least once in the previous month compared to the 39% who reported actually doing so, and 57.5% of respondents thought the ‘typical’ Michigan student had vaginal intercourse three or more times in the previous month compared to the 31.2% who actually reported having done so. That is, 68.6% of respondents over-estimated how many times the ‘typical’ student had vaginal sex compared to themselves.
- 50.8% of respondents believed that the ‘typical’ student had not had anal sex in the past month, while 48.2% believed that the ‘typical’ student had. Altogether, 69.9% of respondents over-estimated what is ‘typical’ compared to their own behavior.

These types of sexual behaviors are not mutually exclusive. We have combined responses to the three different questions to produce a new variable that indicates the combinations of types of sexual behaviors in which the respondents have participated. In doing so, we have not limited this to only the previous month, but we also cannot be certain that the respondent who did not check ‘never’ but indicated not having done so in the past month actually did the behavior during the last school year or, for that matter, while a student at the University of Michigan. Among all respondents, 31.2% reported engaging in none of these sexual behaviors, 12.3% indicated having only engaged in oral sex, 2.1% in only vaginal sex, 37.2% in both oral and vaginal sex, 1.0% in oral and anal sex only, and 0.1% in vaginal and anal sex only, and 16.2% reported engaging in all three (see Figure 2).

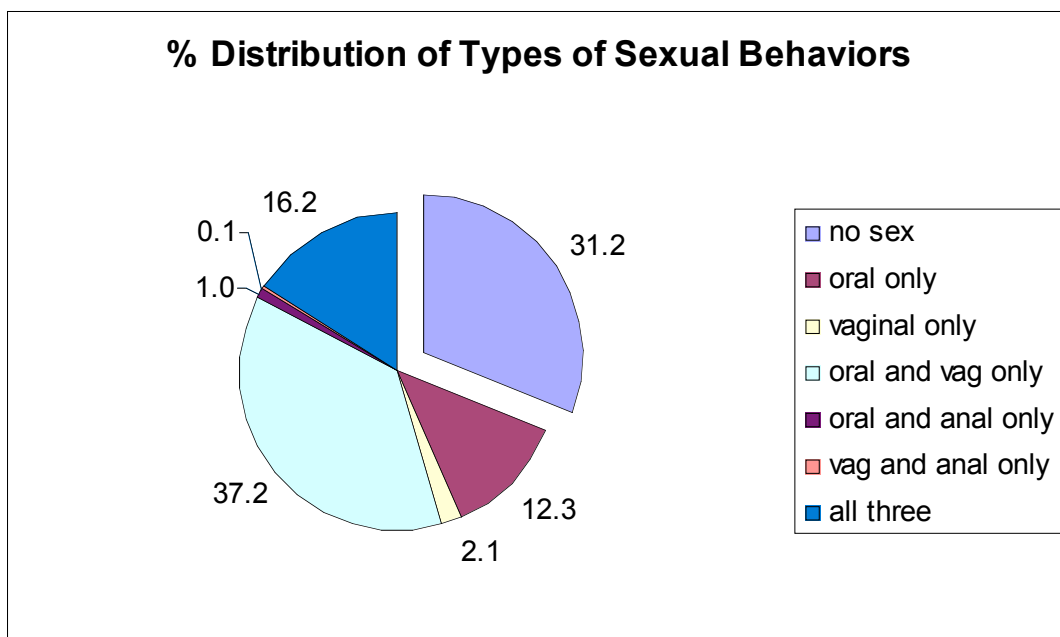


Figure 2

Respondents were asked to indicate how often they had used a condom when having each oral, vaginal, and anal sex of the times they did this in the past 30 days. They were asked to respond to a similar question regarding the ‘typical’ Michigan student as well. Table 14 shows the results for these questions also. The table indicates that:

- † 2.1% of respondents reported using a condom during oral sex in the past 30 days, but more than half (52.5%) said they believed the ‘typical’ student does so at least rarely or more often. Of those who reported having had oral sex in the past month, 95.2% reported never using a condom and 2.5% reported rarely using a condom.
- † Of those who reported to have had vaginal sex at least once in the previous month, 44.9% claimed they or their partner always used a condom, while 24.7% said they never used a condom; however, 77.0% of respondents said they believed the ‘typical’ student mostly or always used a condom.
- † Of those who claimed to have had anal sex at least once in the previous month (n=57), roughly half (53.9%) said they never used a condom while about one-fifth (19.5%) said they always did.
- † Compared to what respondents reported they actually did, 39.2% of respondents over-estimated the use of condoms by the ‘typical’ student during oral sex, 37.4% with respect to vaginal sex, and 36.3% with respect to condom use during anal sex.

The questionnaire also asked respondents to indicate whether or not they or their partner had used a condom the last time they had oral, vaginal, and anal sex. Table 14 indicates that 60.9% of those who had vaginal intercourse said a condom was used the last time, 2.8% of those who had oral sex said a condom was used, and 33.0% of those who had anal sex said a condom was used the last time. That is, except for those respondents who have had sex with a single partner and with a partner who has had sex only with the respondent, a large portion of these sexually active respondents are having unprotected sex and are at-risk for a variety of STDs.

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. Overall, 74.7% of the respondents who indicated being sexually active reported they or their partner used at least one of either birth control pills, Depo Provera, Norplant, condoms, diaphragms or spermicides. Table 15 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:

- † 50.4% of these respondents claimed to use birth control pills, 51.5% claimed to use condoms, 18.6% reported relying on ‘withdrawal,’ 2.9% reported using no method, and 10.9% reported using the ‘morning after’ pill.

TABLE 15. % of Respondents Who Have Had Intercourse Who Used Contraception, Experienced a Pregnancy, or Were Tested for HIV (All Respondents), by Background Characteristics

	Overall N	% Who Answered Yes												
		% Yes	GENDER		RACE		Member Frat./Sor.		AGE				RESIDENCE	
			Female	Male	White	Other	Yes	No	18-19	20-21	22-23	24+	On	Off
(IF HAD VAGINAL INTERCOURSE)														
Used what method to prevent pregnancy the last time (multiple responses allowed)														
Birth Control Pills	647	50.4	53.5	48.0	56.3	35.0***	55.9	49.4	44.5	54.1	60.7	40.9*	39.9	57.1***
Depo Provera (shots)	647	0.4	0.6	0.0	0.4	0.0	0.0	0.4	0.4	0.7	0.0	0.0	0.4	0.5
Norplant (implant)	647	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
Condoms	647	51.5	53.5	51.6	50.7	53.3	62.2	50.4*	55.3	51.7	53.6	18.2*	53.0	50.5
Diaphragm/Cervical cap/sponge	647	0.1	0.3	0.0	0.2	0.0	0.0	0.2	0.4	0.0	0.0	0.0	0.4	0.0
Spermicide (e.g., foam)	647	2.9	3.1	2.9	2.8	3.3	0.0	3.5*	3.4	2.0	3.6	9.1	4.7	1.8*
Fertility awareness (calendar, Mucous, basal temperature)	647	3.1	3.4	2.6	3.0	3.9	1.8	3.3	3.4	2.7	0.0	18.2	2.4	3.6
Withdrawal	647	18.6	22.9	14.4**	19.9	15.6	19.8	18.7	16.0	18.6	25.0	27.3	17.0	19.6
Other Method		3.8	4.0	3.3	3.6	4.4	1.8	4.1	2.9	2.7	4.8	18.2**	3.6	3.8
Nothing	647	2.9	2.1	3.3	1.9	5.6*	2.7	2.9	2.5	3.1	3.6	4.8	3.6	2.5
You or partner used emergency contra- last school year	623	10.9	14.7	6.7***	11.4	9.6**	10.3	10.7*	11.1	12.4	5.0	9.1	10.8	11.0**
Unintentionally became pregnant or got someone else pregnant in the last school year	623	1.1	1.6	1.0**	1.3	0.6	1.9	1.0	1.3	1.1	1.2	0.0	1.2	1.1**
Ever Tested for HIV (all respondents)	931	15.5	17.3	13.3***	17.6	23.4	18.2	19.2	14.5	14.7	34.5	68.2**	14.3	22.4*

* $p(\chi^2) < .05$; ** $p(\chi^2) < .01$; *** $p(\chi^2) < .001$

- ι Females were more likely than males to report they or their partner used withdrawal -- suggesting a significant communication failure between partners.
- ι White respondents were more likely than their counterparts to report using birth control pills, while other race/ethnic group respondents were more likely to report using nothing. White respondents were more likely to report having used emergency contraception.
- ι Members of fraternities or sororities were more likely than their non-Greek counterparts to report using condoms and less likely to report using spermicides.
- ι Except for those 24 years of age or older, older respondents were more likely to report using birth control pills, but those 24 or older were much less likely to report using condoms and more likely to report using some method other than those listed.
- ι Off-campus respondents were more likely than those living on-campus to report using birth control pills, and less likely to report using spermicides.

Because this question was asked so that respondents could give multiple answers, it may obscure the actual degree of risk both for unintended pregnancies and for sexually transmitted diseases. To sharpen the picture, we have grouped respondents based on the type of birth control or the combination of types of birth control they reported they and their partners used the last time they had intercourse. This analysis found that:

- * 26.3% of those sexually active reported using only a condom
- * 33.6% reported using a condom and birth control pills, Depo Provera or Norplant
- * 28.0% reported using only birth control pills, Depo Provera or Norplant
- * 0.0% reported using a condom, diaphragm and spermicide
- * 4.9% reported using withdrawal or a rhythm method
- * 2.6% reported using some other method not listed on the questionnaire
- * 1.8% reported using some other method that would likely be only partially effective without being paired with another method (e.g., such as only a spermicide)
- * and 2.7% reported using nothing

Of those sexually active, 1.1% reported to have unintentionally become pregnant or gotten someone else pregnant during the last school year.

Respondents were also asked whether or not they had ever been tested for HIV. Since sexual activity is only one of several possible ways in which someone can contract HIV, all respondents, whether sexually active or not, were asked this question. Table 15 shows the results for this as well. The table indicates that 15.5% of respondents claimed to have been tested for

HIV. Females, Other race/ethnic group respondents (except Asian respondents), off campus residents, and older respondents were more likely than their respective counterparts to report having been tested.

Victimization

A section of the questionnaire asked respondents to indicate whether or not they had been involved in each of a variety of potentially harmful or troubling events during the last school year. Table 16 lists the nine 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 school year. The table also compares the experience of each of these across various categories of respondents. The table indicates that:

- † 8.9% of respondents indicated having been sexually touched against their will and 9.0% reported having been in an emotionally abusive relationship at least once during the school year.
- † 6.9% claimed to have been in at least one fight, 4.0% claimed to have been assaulted and 2.6% claimed to have been threatened for sex against their will.
- † 2.8% reported what amounts to an attempted rape, and 1.7% reported having been raped.
- † Males and members of Greek organizations were more likely than their counterparts to report having been involved in a physical fight or to have been physically assaulted.
- † Females were more likely than males to report having been touched sexually against their will, to have been threatened for sex, to have been the victim of an attempted rape or raped, and to have been in an emotionally abusive relationship.
- † Those with lower GPAs (not presented in the table) were somewhat more likely than others to report having been in a physically abusive relationship, but it is not clear if the abuse and its aftermath resulted in poor academic performance of if those who are not particularly strong students also make poor relationship choices. This will be examined further below.

TABLE 16. % of Respondents Victimized in Various Ways During the Last School Year, by Background Characteristics

	% Who Answered Yes													
	<u>Overall</u>		<u>GENDER</u>		<u>RACE</u>		<u>RESIDENCE</u>		<u>AGE</u>				<u>Member Frat./Soror.</u>	
	N	% Yes	Female	Male	White	Other	On	Off	18-19	20-21	22-23	24+	Yes	No
Were in a physical fight	939	6.9	3.2	11.0***	7.7	5.1	7.1	6.9	8.0	5.6	9.9	4.0	16.9	5.4***
Were physically assaulted	937	4.0	2.8	5.3*	4.4	3.3	3.7	4.2	4.8	3.3	5.0	0.0	10.2	2.8***
Verbally threatened for sex against will	940	2.6	3.6	1.5*	3.0	1.5	2.1	3.0	1.9	3.8	1.0	0.0	2.9	2.6
Sexually touched against will	938	8.9	14.7	2.4***	9.2	8.4	9.0	8.8	9.2	9.7	5.9	4.0	8.8	8.5
Attempted sexual penetration against will	943	2.8	4.2	0.9***	2.7	2.9	1.8	3.6	2.4	3.0	4.0	0.0	2.9	2.6
Sexually penetrated against will	938	1.7	2.6	0.9*	2.0	1.1	1.1	2.2	0.5	2.8	2.0	0.0	1.5	1.7
In emotionally abusive relationship	940	9.0	11.6	6.2**	8.1	11.4	9.2	8.9	9.2	7.8	14.0	8.0	9.4	8.8
In physically abusive relationship	937	0.7	0.6	0.9	0.9	0.4	1.1	0.4	1.0	0.5	1.0	0.0	0.7	0.8
In sexually abusive relationship	938	0.5	0.6	0.2	0.6	0.4	0.9	0.2	0.7	0.3	1.0	0.0	0.7	0.5

* $p(\chi^2) < .05$; ** $p(\chi^2) < .01$; *** $p(\chi^2) < .001$

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 many times over the last school year, they experienced various feelings, each of which represented an increasingly intense emotional difficulty – from ‘felt overwhelmed by all you had to do’ to ‘attempted suicide.’ Table 17 indicates the percentage distribution of responses to each of the different emotional states. That table indicates that:

- t Nearly half of the respondents (45.2%) indicated having felt overwhelmed and exhausted nine or more times during the last school year; 18.8% said they had felt very sad that many times, and 13.4% said they had felt things were hopeless that many times.
- t 42.1% said they had felt so depressed that it was difficult to function at least once during the school year; 11.3% said they had seriously considered attempting suicide at least once; and 1.1% said they had attempted suicide at least once.

TABLE 17. How Often Respondents Felt Emotionally Troubled in Various Ways During the Last School Year

Within last school year, how many times have you . . .	n	% of Respondents					
		Never	1-2	3-4	5-6	7-8	9 or More
Felt things were hopeless	930	38.0	26.7	10.6	7.8	3.4	13.4
Felt overwhelmed by all you had to do	930	5.7	12.1	12.7	16.6	11.7	41.2
Felt exhausted (not from physical activity)	931	7.2	13.6	14.5	15.1	10.7	38.9
Felt very sad	928	20.2	31.0	14.9	9.3	5.8	18.8
Felt so depressed that it was difficult to function	932	57.8	18.6	6.1	4.5	3.0	9.9
Seriously considered attempting suicide	930	88.7	7.5	2.0	0.3	0.3	1.0
Attempted suicide	931	98.9	0.9	0.1	0.1	0.0	0.0

To explore the experience of such emotional difficulties within the student population, we have constructed an overall index score represented by the combined responses to each of the seven items. Scores could range from 0 for respondents who said they never had any of these troubled feelings to a score of 84 for respondents who said they had felt or done each of these 11 or more times during the last school year. The overall average index score was 23.4 with a standard deviation of 17.0. Table 18 compares these average index scores across demographic groups and indicates females tended to report having experienced more emotionally troubled times than males (26.9 times vs. 19.6 times) and those with GPAs of 'C' or lower more than those with 'A' or 'B,' but there were no statistically significant differences by race/ethnicity, age, residence location, or membership in a Greek organization.

We have also compared these index scores across individuals based on their experience of various types of victimization. These are also shown in Table 18. The table indicates that:

- t Those who had been assaulted, verbally threatened for sex against their will, sexually touched against their will, the victim of an attempted rape, had been involved in an emotionally or sexually abusive relationship all had higher index scores – meaning they reported more times feeling emotionally troubled in the seven ways listed – than those who had not been victimized in these ways.

TABLE 18. Mean Response to Number Times Emotionally Troubled During Last School Year, by Background Characteristics and Victimization Experience

Characteristic		n	Mean	sd	F
Overall	Min=0, Max= 75.50	912	23.4	17.04	
Gender	Females	456	26.9	16.93	42.8**
	Males	447	19.6	16.41	
Race	White	651	23.5	16.66	0.271
	Other	261	22.9	17.96	
Age	18-19	106	23.4	17.03	0.023
	20-21	381	23.4	17.23	
	22-23	98	23.6	17.15	
	24 or older	25	22.6	14.88	
Residence	On-campus	426	22.4	16.67	2.33
	Off-campus	486	24.2	17.33	
GPA	A	383	21.1	15.95	11.002**
	B	417	23.7	17.21	
	C or less	92	30.2	18.36	
Member of Fraternity or Sorority	NO	763	23.5	14.15	0.423
	YES	134	22.4	16.65	
Involved in physical fight last school year	NO	846	23.1	16.87	1.576
	YES	64	25.9	17.91	
Physically assaulted last school year	NO	872	23.1	16.87	6.284*
	YES	35	30.4	19.37	
Verbally threatened for sex against will	NO	890	22.9	16.79	24.607***
	YES	22	40.9	18.05	
Sexually touched against your will	NO	831	22.4	16.39	34.865***
	YES	78	34.1	20.09	
Victim of Attempted rape	NO	887	23.0	16.82	11.609***
	YES	25	34.8	20.12	
Raped	NO	894	23.2	16.92	2.394
	YES	14	30.2	20.85	
In emotionally abusive relationship	NO	830	22.2	16.30	45.812***
	YES	82	35.3	19.76	
In physically abusive relationship	NO	903	23.3	16.88	0.561
	YES	6	28.6	28.12	
In sexually abusive relationship	NO	905	23.3	17.01	4.055*
	YES	4	39.6	17.59	

* p(F) < .05; ** p(F) < .01; *** p(F) < .001

Incidents of Disease

Respondents were asked to report whether or not they had any of 29 different health problems during the last school year and then whether or not they had ever been diagnosed with having the problem. Table 19 shows the percentages of all respondents who reported ever having been diagnosed with each of the problems and the percentage who reported having the problem during the last school year. The table indicates that:

- † Almost half reported having had allergy problems (46.3%) and back pain (43.5%) during the last school year; 30.4% reported having had a sinus infection; and between 6% and 13% reported having had bronchitis, an ear infection, or strep throat.
- † 17.3% reported having had depression – more than had ever been diagnosed with the problem.
- † Females were more likely than males to report having had a problem during the last school year with anxiety disorder, bulimia, depression, repetitive stress injury, back pain, an ear infection, or sinus infections. Males were more likely than females to report having had high blood pressure in the last year.
- † White respondents were more likely than their other race counterparts to report having had allergy problems, ear or sinus infections while they were less likely to report having had Chlamydia during the last school year.
- † Those living off-campus were more likely to report having had high blood pressure, seasonal affective disorder, or a substance abuse problem during the last school year, while on-campus respondents were more likely to report having had bulimia or mononucleosis.
- † Those with lower GPAs were more likely than their counterparts to report experiencing chronic fatigue syndrome, depression, genital herpes, genital warts or HPV, Hepatitis B or C, high blood pressure, HIV infection, substance abuse problems, back pain, and Chlamydia during this last school year.
- † Members of fraternities or sororities were somewhat more likely than non-members to report having had high blood pressure and strep throat during the last school year.

Across all respondents, the average number of these various health problems they reported having during the last school year was 2.44 (standard deviation= 2.49), but 16.0% of the respondents reported having none of these health problems and 23.0% reported having had only one. Roughly seven percent reported having had six or more of these health problems during the last school year. Females reported more health problems than males (2.7 vs. 2.2), white respondents reported more than Other race/ethnic respondents (2.6 vs. 2.1), and those with 'C' or lower GPAs reported more (3.1) than those with 'A' (2.3) or 'B' (2.5) GPAs, but there were no differences by age, residence location, or membership in Greek organizations.

TABLE 19. % of Respondents Who Had Various Health Problems in Last School Year, Ever Diagnosed as Having Various Health Problems, by Background Characteristics

Health Problem	n	% Who Had During Last School Year												
		% Had Last Year	% Ever Diagnosed	GENDER		RACE		RESIDENCE		CUMULATIVE GPA			Member Frat./Sor.	
				Female	Male	White	Other	On	Off	A	B	C/D/F	Yes	No
Allergy Problems	932	46.3	38.3	47.2	45.3	49.2	38.7**	45.1	47.4	44.1	49.1	43.6	44.9	46.4
Anorexia	933	1.6	2.1	2.3	0.9	1.8	1.1	2.3	1.0	1.3	1.4	3.2	0.7	13.8
Anxiety Disorder	934	12.5	6.7	16.2	8.3***	13.4	10.4	10.3	14.5	12.2	11.9	17.0	9.4	13.0
Asthma	928	12.6	16.7	12.8	12.6	13.4	10.6	14.2	11.2	12.4	12.4	17.2	10.9	13.1
Bulimia	931	3.1	1.0	4.7	1.3**	3.5	1.9	4.6	1.8*	2.3	3.0	5.3	1.5	3.5
Chronic Fatigue Syndrome	932	4.1	0.9	4.0	3.7	3.8	4.9	3.9	4.2	2.3	4.7	7.4*	3.6	4.0
Depression	933	17.3	10.4	19.8	14.8*	17.4	17.2	16.3	18.1	14.6	17.9	28.0**	15.2	17.8
Diabetes	930	0.9	0.9	0.6	1.1	0.9	0.8	0.7	1.0	0.3	1.4	1.1	0.7	0.9
Endometriosis	930	1.1	0.5	1.5	0.9	1.4	0.7	1.6	0.8	1.0	0.7	3.2	0.7	1.2
Genital herpes	930	1.2	0.6	1.1	1.1	1.1	1.5	1.6	0.8	0.5	0.9	4.3**	0.7	1.2
Genital warts/HPV	930	2.5	2.1	3.2	2.0	2.9	1.5	1.6	3.4	2.8	1.6	6.3*	2.9	2.6
Hepatitis B or C	930	0.6	0.2	0.2	1.1	0.6	0.8	0.7	0.4	0.5	0.2	3.2**	0.0	0.8
High blood pressure	931	3.7	2.1	1.9	5.5**	3.3	4.5	2.3	4.8*	3.6	2.8	8.4*	7.4	3.2*
High cholesterol	933	4.0	4.3	4.5	3.5	4.1	4.1	4.1	3.8	3.8	4.2	3.2	4.3	3.7
HIV infection	922	0.5	0.1	0.2	0.9	0.6	0.4	0.7	0.2	0.3	0.2	3.3***	0.0	0.5
Repetitive stress injury (e.g., carpal tunnel)	935	6.0	5.5	7.6	4.4	6.3	5.2	6.4	5.6	6.1	5.3	8.5	5.1	6.3
Seasonal Affective Disorder	929	11.6	2.5	12.8	10.0	12.2	9.7	9.2	13.6*	11.6	11.0	13.8	10.1	11.6
Substance abuse problem	934	4.1	1.4	3.6	4.9	4.5	3.0	2.5	5.6*	4.4	2.3	11.7***	1.5	4.6
Back pain	934	43.5	15.3	48.7	37.4***	42.1	47.0	41.4	45.3	38.2	45.9	53.2*	43.5	43.4
Broken bone/fracture	933	5.8	26.6	4.9	6.8	6.2	4.9	5.3	6.4	5.1	6.7	5.3	6.6	5.9
Bronchitis	931	6.3	17.8	7.2	5.3	7.2	4.1	5.7	6.9	6.9	6.6	3.2	6.6	6.4
Chlamydia	930	1.6	1.9	2.4	0.9	1.1	3.0*	1.6	1.6	1.0	1.2	5.3**	1.5	1.7
Ear infection	933	8.3	41.6	10.8	6.0**	9.8	4.9*	8.7	7.9	6.6	10.3	8.6	8.8	8.3
Gonorrhea	934	0.3	0.3	0.2	0.7	0.4	0.4	0.5	0.2	0.3	0.2	1.1	0.0	0.4
Mononucleosis	933	3.6	11.5	3.8	3.3	4.4	1.9	5.0	2.4*	3.6	3.7	3.2	3.6	3.5
Pelvic inflammatory disease	931	0.4	0.2	0.2	0.7	0.5	0.4	0.7	0.2	0.3	0.2	1.1	0.0	0.5
Sinus infection	935	30.4	39.9	36.0	24.9***	34.6	20.1***	29.6	31.1	30.9	32.0	25.5	35.8	29.6
Strep throat	935	12.2	46.6	13.6	11.0	11.8	13.1	11.5	12.8	11.5	13.3	10.6	17.4	11.3*
Tuberculosis	931	0.6	0.7	0.2	1.1	0.8	0.4	0.5	0.8	1.0	0.2	1.1	0.7	0.5

* $p(\chi^2) < .05$; ** $p(\chi^2) < .01$; *** $p(\chi^2) < .001$

Impediments to Academic Performance

Another section of the questionnaire asked respondents if they had each of 28 different kinds of problems -- some disease, some substance abuse, some victimization, some emotional, and some other behavioral -- during the last school year and, if so, the extent to which the experience affected their academic performance. Table 20 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 it either caused them to get a lower grade on an exam or important project, to get a lower grade in a course, or to take an incomplete or drop a course. The table indicates that:

- † More than eight out of ten respondents reported having had a cold, flu, or sore throat or experiencing stress during the last school year.
- † More than a third (34.8%) said they experienced stress to the point that their academic performance was impaired, while 30.4% said their academic performance was impaired as a result of a cold, flu or sore throat, and 26.6% as result of sleep difficulties.
- † Roughly one in six (18.6%) said their academic performance was impaired by concerns for a troubled friend or family member, 17.0% by depression, and 16.3% by relationship difficulties.
- † 8.5% of respondents said their academic performance was impaired by alcohol use; 8.8% by the death of a friend or family member; and 7.2% by a sinus or ear infection, bronchitis, or strep throat.
- † 20.0% said their academic performance had been impaired as a result of problems they experienced because of internet use or computer games.

Figure 3 shows the percentages of students who had various health problems in the last year in descending order of prevalence. The figure also shows the portion of those who had each problem who reported their academic performance suffered as a result.

% Of Students Experiencing Various Problems and Effects on Academic Performance

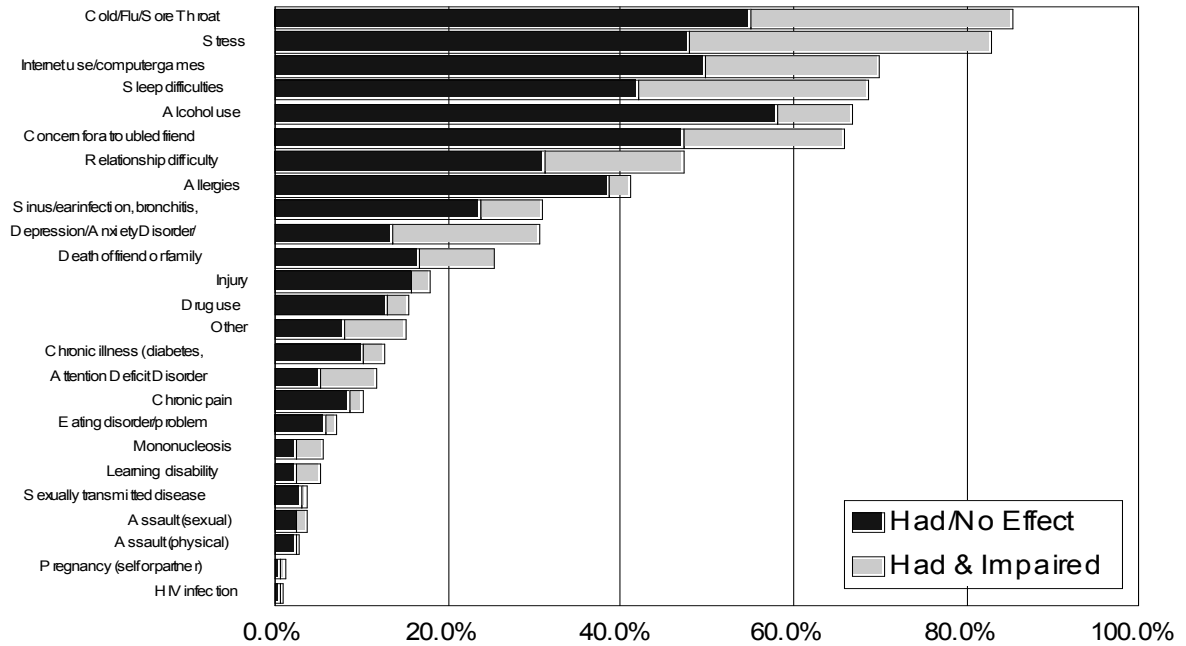


Figure 3

As the figure indicates, the health problems students are most likely to encounter are colds/flu/sore throats, stress, internet/computer game problems, sleep difficulties, and alcohol use. It indicates they are least likely to encounter problems with HIV infection, pregnancy, assaults (physical and sexual), STDs, learning disabilities and mononucleosis.

While Figure 3 illustrates the likelihood of experiencing various health problems, another way of looking at the impact of various health problems is to examine the likely impact on academic performance if the student does experience the health problem. This is depicted in Figure 4 in descending order of likely impact.

As Figure 4 indicates, the health problems that are most likely to impact the students' academic performance are mononucleosis, depression, attention deficit disorder, learning disabilities, and pregnancy. Fortunately, (except in the case of depression) these tend to be among the least prevalent problems. Depression seems to be both relatively common and detrimental to students' academic performances.

Proportion of Students Experiencing Academic Impairment If They Have Various Health Problems

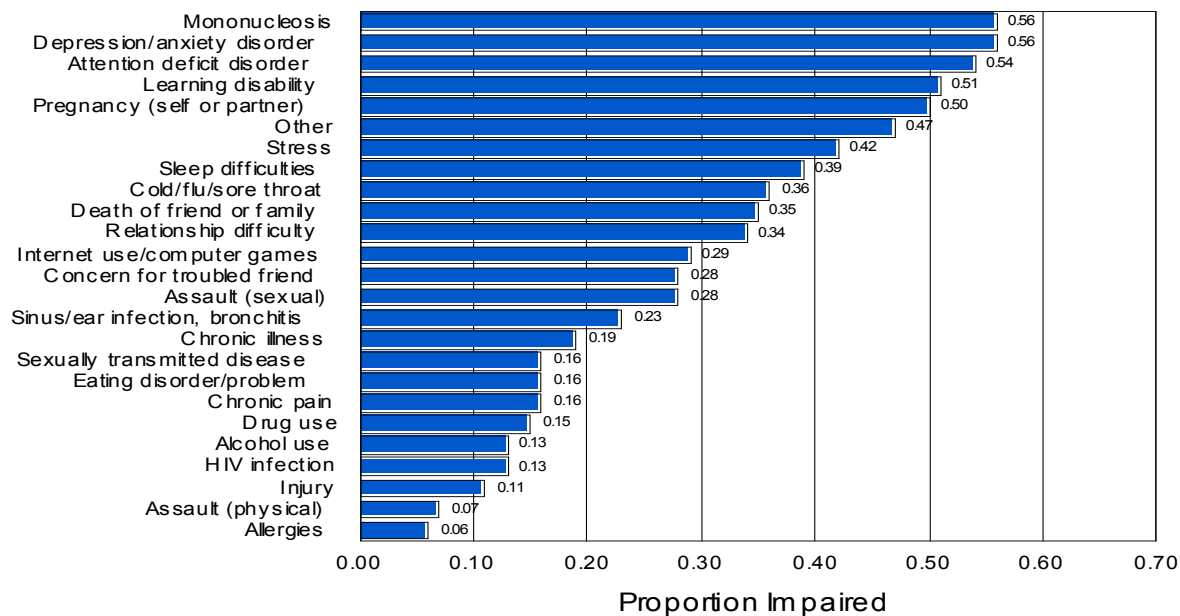


Figure 4

The figure also indicates that some of the most common problems that usually get much public attention and discussion (e.g., drug use, alcohol use) are among those that have the least impact on academic performance. Those health problems that tended to be among the most prevalent (e.g., sleep difficulties, colds/flu/sore throats, internet/computer game use) tend to be among the middle group of problems in terms of their impact on academic performance. Overall, 97.3% of all respondents reported experiencing at least one of these health-related problems and the average number reported was 7.2 (standard deviation = 3.3).

As mentioned above, there were three different types of academic impairments respondents could report: a lower grade on an exam or important project, a lower grade in the course, and an incomplete or dropped course. Among all respondents, 35.8% reported either not having any of these health-related problems or not being academically impaired by any of these, but 64.2% reported having been impaired in at least one of these ways by at least one of the problems. Among all respondents, 58.4% reported receiving a lower grade on an exam or an important project because of experiencing at least one of these problems, 23.6% reported receiving at least one lower grade in a course as a result of at least one of these, and 6.1% reported having to drop or take an incomplete in at least one course because of at least one of these.

Table 20 also compares the percentages who reported impaired performance between males and females, white and Other race/ethnic group respondents, those living on-campus and those living off-campus, those who reported a cumulative GPA of ‘A,’ ‘B,’ and ‘C’ or lower, and members and non-members of fraternities or sororities. The table indicates that:

TABLE 20. % of Respondents Who Had Various Health Problems in Last School Year That Did or Did Not Affect Academic Performance

Health Problem	% Did Not Have	% Had, No Effect	% Had, Some Effect	GENDER		RACE		RESIDENCE		CUMULATIVE GPA			Member Frat./Sor.	
				Female	Male	White	Other	On	Off	A	B	C/D/F	Yes	No
Alcohol use	33.3	58.2	8.5	6.4	10.6	9.2	7.1***	5.5	11.1***	3.8	9.5	22.3***	14.5	7.3***
Allergies	58.9	38.7	2.3	2.8	2.0	2.1	3.0***	2.3	2.4	1.0	3.1	3.2	3.6	2.1
Assault (physical)	97.3	2.5	0.2	0.2	0.2	0.3	0.0	0.2	0.2	0.0	0.2	1.1	0.0	0.3*
Assault (sexual)	96.4	2.6	1.0	0.9	1.1	0.9	1.1	1.1	0.8*	0.8	0.9	1.1	1.5	0.9
Attention Deficit Disorder	88.4	5.3	6.3	5.5	7.1**	5.7	7.5	4.4	7.8	3.3	7.7	11.8*	11.6	5.3***
Cold/Flu/Sore Throat	14.5	55.1	30.4	33.3	27.7**	29.9	31.8**	27.5	33.0	24.1	34.7	39.4***	39.9	28.8*
Concern for a troubled friend or family member	33.4	47.4	18.6	21.3	15.5***	16.1	24.9**	14.9	22.1**	13.9	20.6	25.8**	22.6	17.5
Chronic illness (diabetes, asthma, etc.)	87.2	10.3	2.4	2.5	2.4	2.3	2.6*	2.3	2.4	2.6	2.1	4.3	0.7	2.8
Chronic pain	89.7	8.7	1.6	2.1	1.1*	1.5	1.9	1.4	1.8	1.5	1.9	1.1	2.2	1.5
Death of friend or family member	74.5	16.7	8.8	10.2	7.5	7.5	12.1*	7.8	9.9	6.7	7.5	24.7***	9.5	8.8
Depression/Anxiety Disorder/Seasonal Affective Disorder	69.3	13.6	17.0	20.9	13.1***	17.2	16.7	16.4	17.7	9.6	20.7	31.9***	14.7	17.5
Drug use	84.7	13.1	2.3	1.5	3.1	2.6	1.5	1.6	2.8	1.0	2.1	8.6***	3.0	2.1
Eating disorder/problem	93.0	5.9	1.1	1.3	0.9***	1.4	0.4	1.4	0.8	0.5	1.4	2.1	0.0	1.3
HIV infection	99.2	0.7	0.1	0.0	0.2	0.2	0.0	0.2	0.0	0.0	0.0	1.1	0.0	0.1
Injury	82.0	15.9	2.0	2.8	1.3*	2.0	2.3*	2.1	2.0	1.8	2.1	2.1	2.2	1.9
Internet use/computer games	30.2	49.8	20.0	17.9	21.8*	19.0	22.4*	22.9	17.5**	10.6	23.8	40.2***	16.9	20.3
Learning disability	94.8	2.5	2.6	1.9	3.4	2.6	2.6	1.9	3.3	1.0	3.0	6.5*	6.7	1.9
Mononucleosis	94.5	2.4	3.1	3.4	2.4	3.6	1.9	3.9	2.4	3.4	2.6	4.3	2.9	3.1
Pregnancy (self or partner)	98.4	0.6	0.6	0.4	0.9	0.8	0.4	0.2	1.0	0.3	0.2	3.2***	0.0	0.8
Relationship difficulty	52.6	31.1	16.3	17.7	14.4*	14.3	21.1*	14.5	18.0	11.6	17.0	33.0***	18.2	15.7
Sexually transmitted disease	96.3	3.1	0.6	0.9	0.2	0.5	1.1	0.7	0.6	0.3	0.5	3.2*	0.7	0.5
Sinus/ear infection, bronchitis, strep throat	96.0	23.8	7.2	9.0	5.3***	7.9	5.7***	6.9	7.5	5.7	7.5	12.4	10.3	6.6
Sleep difficulties	31.4	42.0	26.6	27.2	25.3	25.8	28.7	25.5	27.6	19.8	28.1	44.7***	27.2	26.1
Stress	17.2	48.0	34.8	40.1	28.7***	33.7	37.7**	31.2	37.9	24.8	37.7	58.5***	42.3	32.9
Other	84.9	8.0	7.1	6.8	6.8	6.2	9.1	6.5	7.7	3.2	8.7	13.6***	7.8	6.7

* $p(\chi^2) < .05$; ** $p(\chi^2) < .01$; *** $p(\chi^2) < .001$

- t Males were almost twice as likely as females (25.2% vs. 13.0%) to report impairment as a result of internet use or computer games and drug use.
- t Females were more likely than males to report academic impairment due to a cold/flu/sore throat, concern for a troubled friend or family member, chronic pain, relationship difficulties, sinus/ear/lung/throat infections, and stress.
- t Males were more likely to report academic impairment due to attention deficit disorder and internet/computer game problems.
- t Other race/ethnic respondents were more likely than white respondents to report academic impairment as a result of colds/flu/sore throats, concern for a troubled friend or family member, death of a friend or family member, internet/computer game problems, relationship difficulties, and stress. White respondents were more likely to report impairment due to sinus/ear infection and alcohol use.
- t Off-campus respondents were more likely than their on-campus counterparts to report academic impairment as a result of alcohol use and concern for a troubled friend/family member. On-campus respondents were more likely to report impairment as a result of internet use or computer games.
- t Members of fraternities or sororities were more likely than non-members to report academic impairment from alcohol use, attention deficit disorder, and colds/flu/sore throats.
- t There were statistically significant differences in the percentages who reported academic impairment on 15 out of 27 problem types among respondents with different grade point averages. In all of these cases, respondents with lower grade point averages were more likely than their counterparts to report having been academically impaired as a result of the problem.

The consistency of the latter set of comparisons suggests that the academic performance of students could be improved by reducing the transmission of some communicable diseases, by moderating some excessive behaviors, by reducing victimization, and by helping students cope with stress and relationships more effectively.

Distribution of Health Information on Campus

Respondents were asked to indicate whether or not they had ever received health-related information from the University of Michigan on each of a variety of health topics. Table 21 shows the percentages of all respondents, for each topic, who claimed to have received information from the University. The table indicates that:

TABLE 21. % of Respondents Who Ever Received Information from UM on Various Health Topics

Health Topic	n	% Who Ever Received Information
Tobacco use prevention	920	18.6
Alcohol and other drug use prevention	920	54.5
Sexual assault/relationship violence prevention	920	58.4
Violence prevention	920	26.9
Injury prevention and safety	920	14.4
Suicide prevention	920	13.0
Pregnancy prevention	920	22.9
AIDS or HIV prevention	920	31.2
Sexually transmitted disease (STD) prevention	920	41.6
Dietary behaviors and nutrition	920	32.0
Physical activity and fitness	920	30.4
None of the above	920	9.1

- † More than half (54.5%) reported receiving information on alcohol and other drug use prevention and on sexual assault/relationship violence prevention (58.4%).
- † Four out of ten (41.6%) reported receiving information about preventing STD's and three out of ten (31.2%) reported receiving information about preventing AIDS/HIV.
- † 14.4% reported receiving information about safety and preventing injuries and 13.0% received information on preventing suicides.
- † One in eleven (9.1%) reported receiving no health information from the University on any of these topics.

Among those who did report receiving information on at least one of these, the average number of topics on which they reported receiving information from the University was 4.3

(standard deviation = 2.65).

Respondents were also asked to indicate whether health information from the various sources listed was, in their opinion, believable or unbelievable, and from which sources they usually get their health information. Table 22 shows the results. The sources are listed in Table 22 in descending order based on the percentage of respondents who said the source was believable. That table indicates that:

- † Health center medical staff (92.4%) and health educators (92.0%) were most often judged to be believable sources, followed by faculty and coursework (67.8%) and then parents (63.7%). By contrast, less than a quarter of respondents judged health information from friends (21.4%) to be believable. 22.0% and 11.8% of the respondents found health information from the internet/world wide web and television respectively to be believable.
- † Leaflets, pamphlets, and flyers were fifth most frequently judged to be believable.
- † Despite a low percentage (22.0%) of respondents judging the internet as a believable source of information, 75.7% of respondents listed it as their most used source of health information, second only to their parents (79.1%) as a usual source of health information.
- † Although few had judged health information from friends as believable, they were the third most commonly identified source of health information (62.5%).
- † Health center medical staff was cited as a usual source by respondents somewhat more often (60.2%) than leaflets and pamphlets (53.3%), magazines (50.2%), and television (44.2%).
- † Although rated high in believability, faculty or coursework were mentioned by 36.5% of respondents as a usual source of health information.

TABLE 22. Believability of Health Information from Various Sources and Their Prevalence as an Information Source

Source of Information	n	% Believability			% Who Usually Get Info From Source
		Believable	Neither	Unbelievable	
Health center medical staff	936	92.4	6.8	0.7	60.2
Health educators	933	92.0	7.6	0.4	48.0
Faculty/coursework	936	67.8	0.0	1.1	36.5
Parents	935	63.7	34.6	1.7	79.1
Leaflets, pamphlets, flyers	935	60.5	35.5	4.0	53.3
Campus newspaper articles	935	46.4	45.4	8.2	31.7
Campus peer educators	937	42.6	53.4	4.0	11.9
Resident assistants/advisors	935	35.7	58.4	5.9	13.9
Internet/World Wide Web	937	22.0	66.7	11.4	75.7
Magazines	935	21.6	61.4	17.1	50.2
Friends	931	21.4	69.8	8.8	62.5
Religious center	937	18.9	48.9	32.2	6.3
Television	938	11.8	61.5	26.7	44.2
Other	853	9.3	85.3	5.5	30.9

Overall

In order to provide a kind of general overview of the relationships among many of the health related factors or variables summarized in this report, we have constructed a final table, Table 23. This shows the intercorrelations among all 24 variables. In looking at the matrix it is possible to see the extent to which those who use various amounts of alcohol also use other drugs, or the relationship between the frequency of vigorous exercise and the number of different health problems experienced in the year.

Two of the key variables in the matrix are the respondents' subjective general health status and their GPAs. The table provides a way of seeing which variables seem to be correlated significantly with each of these. In general, the table indicates that:

- Those who smoke cigarettes more often, are more overweight or obese, exercise less often, more often get insufficient sleep, were the victim of more undesirable events, also tended to view themselves as less healthy, reported more days of emotional problems, and have lower grade point averages.
- Those with higher grade point averages also tended to have lower Body Mass Index (BMI) scores, drink more when they party (higher BAC levels), more often get adequate sleep, and also have fewer days of emotional problems.
- The use of alcohol, tobacco, and other drugs, although generally directly correlated with each other, are not significantly correlated with subjective health status or GPAs, but they are correlated with the number of types of victimizations (see Table 16 for types of victimizations) the individuals experience.

It appears that subjective report of one's health status is a relatively good proxy for a variety of more objective health conditions. It is very tempting to assume that academic performance is influenced by these correlates but that cannot strictly be concluded from such cross-sectional correlations. But, arguing otherwise amounts to blaming the victim (i.e., 'you drink too much because you have a low GPA'), so we tend to think of GPA as the outcome of other choices and events. Students who are healthier and view themselves as healthier tend to perform better academically.

Helping students make good choices and adopt healthy strategies and behaviors is the task of program planners and health officials. Their task is great but terribly important to the success of the University's students.

Table 23. Correlations Among Key Health-Related Variables

Variable	Variable																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1 General Health Status (1=excellent, 5=poor)		.112b	-0.061	0.056	.226b	-0.055	-.273b	-.225b	-.132b	.241b	0.035	-0.022	-0.025	-0.008	.187b	.102b	.093b
2 Days smoked cigarettes in past 30	.112b		.403b	.540b	0.051	.194b	-0.061	-.086b	-0.007	.109b	-.127b	.273b	.335b	.152b	.095b	0.025	.149b
3 Days drank alcohol in past 30	-0.061	.403b		.421b	0.048	.548b	.082a	.075a	0.028	.083a	-.108b	.678b	.553b	.286b	.073a	-0.040	.223b
4 Days smoked marijuana in past 30	0.056	.540b	.421b		-0.003	.283b	-0.012	-0.004	-0.012	.106b	-.163b	.302b	.397b	.183b	.138b	-0.002	.168b
5 Body Mass Index in 6 categories (1=underwt.; 6=Class III Obese)	.226b	0.051	0.048	-0.003		-.098b	0.038	0.020	-0.001	.084a	-0.009	.081a	0.039	0.016	0.038	.108b	.076a
6 Blood Alcohol Content (BAC)	-0.055	.194b	.548b	.283b	-.098b		.090b	.120b	0.007	0.056	-.210b	.814b	.517b	.164b	0.048	-.081a	.185b
7 Days vigorous exercise in past week	-.273b	-0.061	.082a	-0.012	0.038	.090b		.638b	.199b	-.095b	-0.027	.087b	.088b	0.009	0.007	-0.058	0.000
8 Days strengthening exercise in past week	-.225b	-.086b	.075a	-0.004	0.020	.120b	.638b		.147b	-.094b	0.036	.108b	.090b	-0.003	0.019	-0.058	0.013
9 Days adequate sleep in past week	-.132b	-0.007	0.028	-0.012	-0.001	0.007	.199b	.147b		-.189b	0.046	0.025	-0.028	0.046	-0.026	-.100b	-0.019
10 Number days various emotional problems in past year	.241b	.109b	.083a	.106b	.084a	0.056	-.095b	-.094b	-.189b		0.011	0.050	.129b	0.029	.358b	.118b	.244b
11 Number protective behaviors usually/always do when drinking	0.035	-.127b	-.108b	-.163b	-0.009	-.210b	-0.027	0.036	0.046	0.011		-.142b	-.256b	-0.050	0.024	0.063	-.071a
12 Number drinks consumed last party (0=0, 1=1-4, 2=5-7, 3=8-24)	-0.022	.273b	.678b	.302b	.081a	.814b	.087b	.108b	0.025	0.050	-.142b		.517b	.180b	0.045	-0.041	.176b
13 Number of types of injuries from drinking this last school year	-0.025	.335b	.553b	.397b	0.039	.517b	.088b	.090b	-0.028	.129b	-.256b	.517b		.251b	.111b	-0.056	.360b
14 Number types sexual behaviors active	-0.008	.152b	.286b	.183b	0.016	.164b	0.009	-0.003	0.046	0.029	-0.050	.180b	.251b		.091b	0.044	.174b
15 Number types of health problems last school year	.187b	.095b	.073a	.138b	0.038	0.048	0.007	0.019	-0.026	.358b	0.024	0.045	.111b	.091b		0.040	.210b
16 GPA Categories (1=A, 5=F)	.102b	0.025	-0.040	-0.002	.108b	-.081a	-0.058	-0.058	-.100b	.118b	0.063	-0.041	-0.056	0.044	0.040		0.015
17 Number of victimization types last school year	.093b	.149b	.223b	.168b	.076a	.185b	0.000	0.013	-0.019	.244b	-.071a	.176b	.360b	.174b	.210b	0.015	

a. Correlation is significant at the 0.05 level (2-tailed); b. Correlation is significant at the 0.01 level (2-tailed).