

American College Health Association– National College Health Assessment Spring 2007 Reference Group Data Report (Abridged)

The American College Health Association

Abstract. Objective: Assessing and understanding the health needs and capacities of college students is paramount to creating healthy campus communities. The American College Health Association–National College Health Assessment (ACHA–NCHA) is a survey that ACHA developed in 1998 to assist institutions of higher education in achieving this goal. The ACHA–NCHA contains approximately 300 questions assessing student health status and health problems, risk and protective behaviors, and impediments to academic performance. **Participants:** The spring 2007 reference group includes ACHA–NCHA data from 71,860 students at 107 institutions of higher education. **Methods:** Officials at participating institutions administered the ACHA–NCHA to all students, to randomly selected students, or to students in randomly selected classrooms. ACHA collected data between January and May 2007. **Results:** Results from the spring 2007 reference group ($N = 71,860$) are presented. **Conclusions:** These data expand the understanding of the health needs and capacities of college students.

Keywords: American College Health Association–National College Health Assessment, college health, health behaviors, student learning, Web-based survey

According to the US Department of Education, there are more than 4,200 degree-granting colleges and universities in the United States, enrolling 17.5 million students in fall 2005.¹ Of those students, 86% were enrolled in undergraduate programs, 12% in graduate programs, and 2% in professional programs.

Since its inception in 1920, the American College Health Association (ACHA) has been dedicated to the health needs of students at colleges and universities nationwide. It is the principal leadership organization for the field of college health and provides services, communications, and advocacy to help its members advance the health of their

campus communities.² Further information about ACHA is available at <http://www.acha.org>.

In 1998, ACHA initiated a work group to develop the ACHA–National College Health Assessment (ACHA–NCHA), a survey instrument designed to collect information on a broad range of student health behaviors, indicators, and perceptions. The development of the ACHA–NCHA has been described in a previous article.³ From its inception in spring 2000 through the spring 2007 survey implementation, the ACHA–NCHA has been used to collect data from 455,732 college students at 389 institutions of higher education. Reliability and validity analyses of the ACHA–NCHA are described in a previous article³ and in an ACHA report.⁴

The ACHA–NCHA has ties to 2 other important documents distributed by the ACHA: Standards of Practice for Health Promotion in Higher Education⁵ and *Healthy Campus 2010: Making It Happen*.⁶ Standard 5 of ACHA's Standards of Practice suggests that health-promotion professionals in higher education conduct population-based assessments of students' health status, needs, and assets as a critical indicator of evidence-based practice.⁵ The ACHA–NCHA supports the Standards of Practice by providing such a survey tool to create evidence-based approaches aimed at improving the health of college students. *Healthy Campus 2010* is a set of national health objectives that college and university administrators use to set goals for improving students' health.⁶ By providing the necessary baseline data for many of the national objectives, the ACHA–NCHA supports *Healthy Campus 2010*, the ACHA companion document to *Healthy People 2010*.⁷

METHODS

One hundred and thirteen North American postsecondary institutions self-selected to participate in the spring 2007

TABLE 1. Demographic Characteristics of Survey Participants

Characteristic	<i>n</i>	%
Sex		
Female	44,442	64.1
Male	24,932	35.9
Age (y)		
18–20	37,153	53.0
21–29	28,805	41.1
≥ 30	4,130	5.9
Student status		
1st-year undergraduate	17,437	25.3
2nd-year undergraduate	15,748	22.8
3rd-year undergraduate	15,086	21.9
4th-year undergraduate	11,955	17.3
5th year or more	3,704	5.4
Graduate	3,961	5.7
Adult special/other	1,088	1.6
Full-time	65,521	93.4
Race or ethnicity (select all that apply)		
White, not Hispanic (includes Middle Eastern)	52,678	73.3
Black, not Hispanic	3,732	5.2
Hispanic or Latino	5,832	8.1
Asian or Pacific Islander	7,922	11.0
American Indian or Alaskan Native	953	1.3
Other	2,955	4.1
International student status	2,704	3.9
Membership in a social fraternity or sorority	5,210	7.4
Relationship status		
Single	38,973	55.3
Married/domestic partner	4,675	6.6
Engaged/committed dating relationship	25,995	36.9
Separated	245	0.3
Divorced	463	0.7
Widowed	81	0.1
Sexual orientation and gender identity		
Heterosexual	65,439	93.5
Gay/lesbian	1,384	2.0
Bisexual	1,865	2.7
Transgender	75	0.1
Unsure	1,202	1.7
Living situation		
Campus residence hall	26,326	37.4
Fraternity or sorority house	868	1.2
Other university housing	3,383	4.8
Off-campus housing	25,310	35.9
Parent/guardian's home	10,897	15.5
Other	3,631	5.2

Note. *N* = 71,860.

ACHA–NCHA. Students on those campuses completed 72,786 surveys. The ACHA–NCHA spring 2007 reference group included data only from institutions that used random sampling techniques, which yielded a final data set consisting of 71,860 students on 107 campuses. The results for this reference group are presented in this article. Results from

the 2003–2006 data-collection periods have been previously published.^{3,8–10}

Of the 107 campuses, 69 were public colleges or universities and 38 were private. The majority (93) were 4-year institutions. The number of students enrolled in the participating schools varied: 16 institutions had fewer than 2,500 students; 10 had 2,500–4,999 students; 20 had 5,000–9,999 students; 25 had 10,000–19,999 students; and 36 had 20,000 or more students. Also varied were the geographic locations of the reporting institutions: 23 were in the Northeast, 29 were in the Midwest, 20 were in the South, and 33 were in the West. Two institutions were located in Canada. Campus locations also varied. Twenty-one schools were in cities with populations greater than 500,000; 14 schools were in cities with populations between 250,000 and 499,999; 36 schools were in cities with populations of 50,000 to 249,999; 26 schools were in towns with populations between 10,000 and 49,999; 8 schools were in towns with populations of 2,500 to 9,999; and 2 schools were located in rural communities with populations of less than 2,500. Furthermore, 22 of the 107 schools were religiously affiliated—11 were Catholic institutions, and 11 more were Protestant or other Christian-affiliated. Eleven of the 107 institutions reported 1 or more types of minority status as designated by the US Department of Education: 1 school was a historically black college or university, 10 schools reported high Hispanic enrollment, and 6 schools were Hispanic-serving institutions.

Sampling strategies included a mix of randomized classroom and Web-based surveying. The overall mean response proportion was 39%. The mean response proportion was 88% for schools administering paper surveys in randomly selected classrooms and 22% for schools conducting randomized Web-based surveying.

Of the 107 schools in this reference group, 79 used the ACHA–NCHA Web version (*n* = 53,633; 75%), and 28 used the ACHA–NCHA paper scanform version of the survey (*n* = 18,227; 25%). Researchers conducted a systematic evaluation to compare the ACHA–NCHA scan form with the Web-based ACHA–NCHA.¹¹

There were statistically significant differences for every variable comparison because of the large size of the sample; therefore, the magnitude of the effect size was evaluated using the contingency coefficient for cross-tabulations and mean differences when conducting *t* tests. The results demonstrate, on average, a contingency coefficient of .05 among the 218 cross-tabulations conducted and a mean difference of .33 among the 45 *t* tests conducted. The evaluation indicated that the largest differences, albeit miniscule, were on 2 demographic and 4 perception variables. Online respondents were slightly younger, were more likely to live in campus housing, and estimated other students' alcohol use as higher than did respondents who used the paper scanforms. Paper scanform respondents estimated other students' cigarette use, Rohypnol (flunitrazepam) use, and number of sexual partners as

TABLE 2. Top 10 Reported Health Impediments to Students' Academic Performance

Rank	Health impediment	Total		Women		Men	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1	Stress	23,752	34.1	16,556	37.8	6,785	27.8
2	Cold/flu/sore throat	18,904	27.1	12,926	29.5	5,655	23.2
3	Sleep difficulties	18,223	26.1	11,891	27.1	6,008	24.6
4	Concern for troubled friend or family member	13,232	19.0	9,348	21.4	3,649	15.0
5	Relationship difficulty	11,406	16.4	7,671	17.5	3,549	14.6
6	Depression/anxiety disorder/SAD	11,384	16.3	8,126	18.6	3,043	12.5
7	Internet use/computer games	11,335	16.3	5,947	13.6	5,201	21.3
8	Death of a friend or family member	6,574	9.4	4,665	10.7	1,765	7.2
9	Sinus infection/ear infection/bronchitis/strep throat	6,093	8.8	4,542	10.4	1,439	5.9
10	Alcohol use	5,394	7.7	2,936	6.7	2,337	9.5

Note. Refers to question 44: "Within the past school year, have any of the following affected your academic performance? (received an incomplete, dropped a course, received a lower grade in a class, on an exam or on an important project)." We based the rank order of impediments to academic performance on total participants. Because of missing data by sex, the sum of women's and men's responses does not always equal the total. SAD = seasonal affective disorder.

higher than did respondents who used the online version. Because there were so few meaningful differences in survey item comparisons, data from paper and Web-based surveys were combined in this report.

ACHA scanned the paper surveys, hosted the ACHA-NCHA Web survey, and produced all reports for the participating institutions. ACHA also compiled the reference group report, executive summary, and aggregate data set. Each participating campus was required to provide documentation of applicable institutional approval of survey research involving human subjects.

RESULTS

This report offers information on a number of current and relevant health topics that affect the health and academic success of college students, such as substance use, sexual behaviors, weight and nutrition, violence, and physical and mental health. Several unique questions in the ACHA-NCHA provide data on health impediments to academic performance and sources and believability of health-related information. The ACHA-NCHA also provides insight into issues affecting the college student population that are not often captured, although they may influence students' health status (eg, hours spent volunteering, credit card debt). All percentages included in this report represent valid percentages.

Demographic Characteristics

The spring 2007 ACHA-NCHA contained a number of questions to obtain students' demographic information. Several questions also were related to aspects of student life

that may affect health status, but that are not often identified as typical health issues. The following are findings from these questions:

When asked whether they had any kind of health insurance (including prepaid plans such as HMOs), 85.8% (*n* = 59,551) of students responded *yes*.

When asked how many hours a week they worked for pay or as volunteers, students reported the following:

- 17.2% (*n* = 12,082) worked 1–9 hours a week for pay;
- 20.0% (*n* = 14,036) worked 10–19 hours a week for pay;
- 24.7% (*n* = 17,327) worked 20 hours or more a week for pay;
- 30.8% (*n* = 21,536) volunteered 1–9 hours a week;
- 2.7% (*n* = 1,860) volunteered 10–19 hours a week; and
- 1.1% (*n* = 765) volunteered 20 hours or more a week.

Students with credit cards who were responsible for paying the balance described their past-month credit card debt as follows:

- 71.2% (*n* = 49,465) carried no credit card debt or paid the full amount;
- 15.9% (*n* = 11,050) carried \$1–\$999 in credit card debt;
- 4.4% (*n* = 3,024) carried \$1,000–\$1,999 in credit card debt;
- 4.0% (*n* = 2,751) carried \$2,000–\$3,999 in credit card debt;
- 1.9% (*n* = 1,291) carried \$4,000–\$5,999 in credit card debt; and

TABLE 3. Reported Sources and Believability of Health-Related Information, by Rank Order

Rank	Source of information	n	%
<i>Used</i>			
1	Parent	51,888	74.6
2	Internet/World Wide Web	51,272	73.6
3	Friend	41,966	60.4
4	Health center medical staff	39,036	56.0
5	Health educator	36,856	53.0
6	Leaflet/pamphlet/flyer	36,242	51.9
7	Magazine	35,977	51.7
8	Television	31,504	45.2
9	Faculty/coursework	26,166	37.7
10	Campus newspaper article	19,188	27.6
11	Campus peer educator	13,243	19.1
12	Resident assistant/advisor	11,879	17.2
13	Religious center	7,497	10.8
<i>Believable</i>			
1	Health educator	62,123	88.7
2	Health center medical staff	61,895	88.3
3	Parent	45,999	65.6
4	Faculty/coursework	44,476	63.7
5	Leaflet/pamphlet/flyer	41,959	59.7
6	Campus newspaper article	34,105	48.7
7	Campus peer educator	31,544	45.3
8	Resident assistant/advisor	24,476	35.2
9	Internet/World Wide Web	17,884	25.5
10	Friend	17,483	24.9
11	Religious center	17,308	24.7
12	Magazine	15,968	22.8
13	Television	9,614	13.7

Note. Refers to questions 3 and 4: "Do you usually get health-related information from any of the following sources? (no, yes);" "Record the believability of each source of health information (believable, neither believable nor unbelievable, unbelievable)."

• 2.8% ($n = 1,918$) carried \$6,000 or more in credit card debt.

Table 1 lists additional demographic characteristics. Table 2 lists the top 10 health impediments to academic performance, as reported by students.

Health, Health Education, and Safety

In the survey, 8 questions asked about health, health education, and safety concerns. Students provided information on their health status, health information sources, incidences of violence, incidences of sexual assault, and preventive measures against injury.

When asked to describe their general health status, students reported the following: 90.6% ($n = 64,855$) said *good*, *very good*, or *excellent*; 7.8% ($n = 5,616$) said *fair*; and 1.3% ($n = 907$) said *poor*. Tables 3 and 4 provide findings related to health information received from students' colleges or universities as well as students'

TABLE 4. Type of Information Students Reported Receiving From Their College or University

Information type	n	%
Alcohol and other drug use prevention	35,457	49.3
Sexual assault/relationship violence prevention	31,557	43.9
Physical activity and fitness	26,967	37.5
Sexually transmitted disease prevention	26,142	36.4
Dietary behaviors and nutrition	22,480	31.3
AIDS or HIV infection prevention	20,621	28.7
Tobacco use prevention	17,230	24.0
Pregnancy prevention	16,259	22.6
Violence prevention	15,187	21.1
Suicide prevention	10,975	15.3
Injury prevention and safety	10,361	14.4
None of the above	17,718	24.7

Note. Refers to question 2: "On which of the following health topics have you ever received information from your college or university? (select all that apply)."

sources of health-related information and the believability of those sources.

When asked about seat belt use during the past school year, 77.7% of students ($n = 55,235$) who rode in a car said they always wore a seat belt. When asked about helmet use during the past school year, 19.9% of students ($n = 6,795$) who rode a bicycle said they always wore a helmet, 71.2% of students ($n = 8,163$) who rode a motorcycle said they always wore a helmet, and 13.2% of students ($n = 1,658$) who used in-line skates said they always wore a helmet.

When asked about past-school-year physical fights and assaults, 7.4% of students ($n = 5,259$) reported having been in a physical fight, and 4.2% ($n = 3,014$) reported having been physically assaulted (sexual assault not included). Tables 5 and 6 provide information on the types of sexual assaults and abusive relationships (ie, emotionally, physically, or sexually abusive) reported in the past school year.

Weight, Nutrition, and Exercise

Five questions examined weight, nutrition, and exercise. Overall, 6.7% of students ($n = 4,679$) reported eating 5 or more servings of fruits and vegetables daily. (The survey defined a serving as 1 medium piece of fruit; one-half cup chopped, cooked, or canned fruits or vegetables; three-fourths cup fruit or vegetable juice; a small bowl of salad greens; or one-half cup dried fruit.)

In terms of physical activity, 42.8% of students ($n = 30,279$) reported exercising vigorously for at least 20 minutes or moderately for at least 30 minutes on at least 3 of the past 7 days, and 48.2% ($n = 33,965$) reported exercising to strengthen or tone muscles on at least 2 of the past 7 days.

TABLE 5. Types of Sexual Assault Students Reported Experiencing in the Past School Year

Sexual assault behavior	Total		Women		Men	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Verbal threats for sex against your will	2,587	3.6	1,787	4.0	681	2.7
Sexual touching against your will	5,964	8.4	4,675	10.6	1,083	4.4
Attempted sexual penetration against your will	2,000	2.8	1,627	3.7	289	1.2
Sexual penetration against your will	1,113	1.6	833	1.9	222	0.9

Note. Refers to question 7: “Within the past school year, have you experienced...? (*no, yes*).” Because of missing data by sex, the sum of the data from men’s and women’s responses does not always equal the total.

TABLE 6. Types of Abusive Relationships Students Reported Experiencing in the Past School Year

Type of abusive relationship	Total		Women		Men	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Emotional	9,712	13.6	6,909	15.6	2,464	9.9
Physical	1,692	2.4	1,146	2.6	456	1.8
Sexual	1,220	1.7	835	1.9	322	1.3

Note. Refers to question 8: “Within the past school year, have you been in a relationship that was...? (*no, yes*).” Because of missing data by sex, the sum of the data from men’s and women’s responses does not always equal the total.

TABLE 7. Estimated Body Mass Index (BMI) and Classifications Based on Students’ Reported Height and Weight

BMI	Category	Total		Women		Men	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
< 18.5	Underweight	3,189	4.6	2,461	5.7	655	2.7
18.5–24.9	Healthy weight	42,947	62.4	28,520	65.7	13,833	56.8
25–29.9	Overweight	15,298	22.2	8,142	18.8	6,911	28.4
30–34.9	Class I obesity	4,849	7.0	2,690	6.2	2,064	8.5
35–39.9	Class II obesity	1,646	2.4	967	2.2	641	2.6
≥ 40	Class III obesity	870	1.3	606	1.4	251	1.0

Note. BMI = weight (in kg/m²). Because of missing data by sex, the sum of the data from men’s and women’s responses does not always equal the total.

The mean estimated body mass index (BMI, in kg/m²) was 23.8 for women (*SD* = 4.9) and 24.8 for men (*SD* = 4.6). Both values fall within the healthy weight range as defined by the National Institutes of Health.¹² BMI was calculated on the basis of students’ self-reported heights and weights. Tables 7, 8, and 9 provide results related to estimated BMI, BMI classifications, students’ descriptions of their weight, and reported weight-loss behaviors.

Sexual Behavior, Perceptions, and Contraception

The survey contained 13 questions about students’ sexual behavior, perceptions of peers’ sexual behavior, and contraception use. The following are highlights of findings from this section:

- 28.4% of students (*n* = 19,954) reported having ever been tested for HIV infection;

TABLE 8. Students' Reported Descriptions of Weight

Response	Total		Women		Men	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Very underweight	456	0.6	185	0.4	242	1.0
Slightly underweight	6,787	9.7	3,058	7.0	3,526	14.4
About the right weight	37,468	53.3	23,424	53.3	13,005	53.3
Slightly overweight	22,613	32.2	15,084	34.4	6,944	28.4
Very overweight	2,956	4.2	2,158	4.9	698	2.9

Note. Refers to question 35: "How do you describe your weight?" Because of missing data by sex, the sum of the data from men's and women's responses does not always equal the total.

TABLE 9. Reported Types of Weight-Loss Behavior in Which Students Engaged During the Past 30 Days

Behavior	Total		Women		Men	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Exercise to lose weight	39,215	54.6	27,220	61.2	10,960	44.0
Diet to lose weight	25,053	34.9	18,852	42.4	5,632	22.6
Vomit or take laxatives to lose weight	1,757	2.4	1,564	3.5	146	0.6
Take diet pills to lose weight	2,704	3.8	2,106	4.7	521	2.1

Note. Refers to question 37: "Within the past 30 days, did you do any of the following? (*select all that apply*)."

 Because of missing data by sex, the sum of the data from men's and women's responses does not always equal the total.
TABLE 10. Reported Types of Contraception Students Used the Last Time They Engaged in Vaginal Intercourse

Contraceptive method	Total		Women		Men	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Birth control pills	27,579	38.4	17,719	39.9	9,120	36.6
Condoms (male or female)	27,330	38.0	16,300	36.7	10,313	41.4
Withdrawal	11,055	15.4	7,108	16.0	3,640	14.6
Fertility awareness	1,808	2.5	1,152	2.6	613	2.5
Spermicide	1,718	2.4	873	2.0	797	3.2
Depo Provera	1,031	1.4	704	1.6	286	1.1
Diaphragm/cervical cap/sponge	299	0.4	141	0.3	149	0.6
Norplant	181	0.3	64	0.1	111	0.4
Other method	3,265	4.5	2,315	5.2	844	3.4
Nothing	3,277	4.6	1,938	4.4	1,182	4.7
Have not had vaginal intercourse	16,784	23.4	10,759	24.2	5,629	22.6
Did not answer or skipped question	5,847	8.1	2,829	6.4	2,399	9.6

Note. Refers to question 28: "If you have had vaginal intercourse, what method did you or your partner use to prevent pregnancy the last time? (*select all that apply*)."

 Because of missing data by sex, the sum of the data from men's and women's responses does not always equal the total.

- 59.0% of women ($n = 25,930$) reported having had a routine gynecological examination in the past year;
- 14.1% of sexually active women ($n = 4,325$) reported having used emergency contraception within the past school year;

- 2.3% of female students ($n = 718$) who had had vaginal intercourse within the past school year reported having become pregnant unintentionally; and
- 2.5% of male students ($n = 419$) who had had vaginal

TABLE 11. Reported Condom Use Among Sexually Active Students the Last Time They Had Intercourse

Sexual intercourse	Total		Women		Men	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Oral	2,218	4.5	1,234	4.1	894	5.0
Vaginal	25,219	52.8	14,898	49.8	9,648	58.8
Anal	3,969	27.9	1,742	21.8	2,097	36.6

Note. Refers to question 27: "If you are sexually active, did you use a condom the last time you had: oral sex, vaginal intercourse, anal intercourse? (*never, no, yes, don't know/don't remember*)."
We excluded students reporting never having performed the sexual activity. Because of missing data by sex, the sum of the data from men's and women's responses does not always equal the total.

TABLE 12. Reported Sexually Transmitted Infection (STI), Disease (STD), or Complication Among Students in the Past School Year

STI/STD	Total		Women		Men	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Genital warts/human papillomavirus	1,755	2.5	1,440	3.3	271	1.1
Genital herpes	666	1.0	506	1.2	139	0.6
Chlamydia	568	0.8	404	0.9	140	0.6
Pelvic Inflammatory Disease	242	0.3	182	0.4	50	0.2
HIV	192	0.3	95	0.2	86	0.4
Gonorrhea	146	0.2	73	0.2	64	0.3

Note. Refers to question 43: "Within the past school year, have you had any of the following? (*no, yes*)."
Because of missing data by sex, the sum of the data from men's and women's responses does not always equal the total.

TABLE 13. Number of Alcoholic Drinks Students Reported Consuming the Last Time They Partied

Number of drinks	Total		Women		Men	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
0	15,943	22.5	9,762	22.2	5,588	22.7
1-4	27,128	38.3	19,786	45.1	6,593	26.7
5-8	18,537	26.2	11,451	26.1	6,541	26.5
9 or more	9,207	13.0	2,919	6.6	5,925	24.0

Note. Refers to Question 13: "The last time you partied/socialized, how many alcoholic drinks did you have?" Because of missing data by sex, the sum of the data from men's and women's responses does not always equal the total.

intercourse within the past school year reported having gotten someone pregnant unintentionally.

Although 75.0% of students ($n = 52,851$) reported having had 0 or 1 sexual (oral, anal, or vaginal) partners in the past school year, only 16.6% ($n = 11,498$) thought the typical

student at their school had had 0 or 1 sexual partners in the past school year. In addition, students reported the following past-month sexual behaviors:

- 45.3% of students ($n = 30,959$) reported having had oral sex 1 or more times, although 93.6% ($n = 63,485$) thought

TABLE 14. Protective Behaviors in Which Students Reported Always or Usually Engaging When Drinking in the Past School Year

Behavior	Total		Women		Men	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Eat before and/or during drinking	44,738	80.1	28,357	81.4	15,109	78.3
Use a designated driver	42,408	79.0	27,760	82.9	13,432	72.3
Keep track of how many drinks you were having	36,177	65.2	24,361	70.4	10,849	56.4
Determine in advance not to exceed a set number of drinks	21,605	38.9	14,919	43.1	6,090	31.6
Avoid drinking games	21,083	37.8	14,346	41.1	6,100	31.7
Alternate nonalcoholic with alcoholic beverages	16,973	30.6	11,670	33.6	4,840	25.2
Have a friend let you know when you've had enough	15,972	29.1	11,197	32.8	4,206	22.1
Pace your drinks to 1 or fewer per hour	16,072	29.0	12,006	34.8	3,604	18.8
Choose not to drink alcohol	15,518	26.4	10,772	29.2	4,255	21.2
Drink an alcohol look-alike (nonalcoholic beer, punch, etc)	4,007	7.1	2,942	8.4	923	4.8

Note. Refers to question 17: "During the past school year, if you 'partied/socialized,' did you always or usually...?" We excluded students reporting *not applicable/don't drink*. Because of missing data by sex, the sum of the data from men's and women's responses does not always equal the total.

TABLE 15. Reported Consequences Students Experienced After Drinking Alcohol in the Past School Year

Consequence	Total		Women		Men	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Did something you later regretted	20,110	36.1	12,212	35.1	7,274	37.6
Forgot where you were or what you did	17,503	31.4	10,275	29.6	6,680	34.6
Physically injured yourself	10,794	19.3	6,522	18.7	3,909	20.2
Had unprotected sex	8,796	15.8	4,947	14.3	3,493	18.1
Were involved in a fight	4,049	7.3	1,709	4.9	2,148	11.1
Physically injured another person	2,618	4.7	1,042	3.0	1,454	7.5
Someone used force or threat of force to have sex with you	830	1.5	615	1.8	165	0.9

Note. Refers to question 18: "If you drink alcohol, within the past school year, have you experienced any of the following consequences of your drinking? (*not applicable/don't drink, no, yes*).?" We excluded students reporting *not applicable/don't drink*. Because of missing data by sex, the sum of the data from men's and women's responses does not always equal the total.

the typical student had had oral sex 1 or more times in the past 30 days;

- 49.1% of students ($n = 33,560$) reported having had vaginal intercourse 1 or more times, but 94.4% of respondents ($n = 63,985$) thought the typical student had had vaginal sex 1 or more times in the past 30 days; and

- 5.2% of students ($n = 3,512$) reported having had anal intercourse 1 or more times, whereas 62.5% of respondents ($n = 42,211$) thought the typical student had had anal sex 1 or more times in the past 30 days.

Tables 10, 11, and 12 provide results related to students' contraception and condom use as well as reported incidence of sexually transmitted infection, disease, or complications.

Alcohol, Tobacco, and Other Drug Use

The survey contained 11 questions about alcohol, tobacco, and other drug use. Although 64.0% of students ($n = 45,740$) reported never using cigarettes, only 11.2% ($n = 7,965$) thought the typical student never used cigarettes. In addition, 18.6% ($n = 13,215$) reported never using alcohol,

TABLE 16. Reported Substance Use Among Students in the Past 30 Days, by Duration of Use

Behavior	Never used		Not used in past month		No. of days										All 30	
	n	%	n	%	1-2		3-5		6-9		10-19		20-29		n	%
					n	%	n	%	n	%	n	%	n	%		
Alcohol	13,215	18.6	9,997	14.0	13,267	18.6	12,794	18.0	11,180	15.7	8,215	11.5	2,164	3.0	395	0.6
Cigarettes	45,740	64.0	12,471	17.5	3,993	5.6	1,627	2.3	1,079	1.5	1,550	2.2	1,599	2.2	3,404	4.8
Smokeless tobacco	63,110	89.1	5,193	7.3	887	1.3	412	0.6	297	0.4	303	0.4	244	0.3	356	0.5
Cigars	52,642	73.9	14,618	20.5	2,936	4.1	512	0.7	239	0.3	153	0.2	90	0.1	89	0.1
Marijuana	45,547	63.9	13,980	19.6	4,354	6.1	1,846	2.6	1,371	1.9	1,477	2.1	1,477	2.1	1,218	1.7
Amphetamines	65,783	92.2	3,705	5.2	666	0.9	326	0.5	223	0.3	253	0.4	178	0.2	208	0.3
Cocaine	66,229	92.8	3,785	5.3	781	1.1	253	0.4	143	0.2	89	0.1	20	0.0	45	0.1
Rohypnol, GHB, or liquid X (intentional use)	70,542	98.9	673	0.9	45	0.1	21	0.0	10	0.0	5	0.0	4	0.0	25	0.0
Ecstasy (MDMA) ^a	50,711	95.1	2,275	4.3	256	0.5	44	0.1	11	0.0	4	0.0	3	0.0	10	0.0

Note. Refers to question 9: "Within the past 30 days, on how many days did you use the following substances?" GHB = gamma-hydroxybutyric acid.
^aWe measured ecstasy use only among respondents using the ACHA-NCHA Web survey ($N = 43,231$).

yet 3.8% ($n = 2,670$) thought the typical student never used alcohol. Likewise, 63.9% of students ($n = 45,547$) reported never using marijuana, although 17.5% ($n = 12,431$) thought the typical student never used marijuana.

On February 5, 2004, the National Institute on Alcohol Abuse and Alcoholism's National Advisory Council defined *binge drinking* as a pattern of drinking alcohol that brings blood alcohol concentration (BAC) to 0.08% or higher.¹³ Furthermore, all 50 states and the District of Columbia have laws banning driving with a BAC of 0.08% or higher.¹⁴ Variables on the ACHA-NCHA (the reported number of drinks consumed the last time students partied or socialized, as well as the number of hours during which they partied or socialized) allow for the calculation of an estimated BAC for the last drinking occasion, with a formula from the US Department of Transportation, National Highway Traffic Safety Administration, that uses reported sex, weight, and number of drinks consumed over the number of hours of drinking.¹⁵ The mean estimated BAC was 0.071% ($SD = 0.085$) for female students and 0.070% ($SD = 0.085$) for male students. Excluding students who do not drink and students who do not drive, 34.8% ($n = 17,104$) of the students reported driving after drinking any alcohol during the past 30 days. Tables 13, 14, 15, and 16 present findings on students' alcohol and drug use, alcohol-related protective behaviors, and the consequences students reported as a result of their drinking.

Mental and Physical Health

Four questions in the survey assessed students' mental and physical health. The percentage of students reporting a diagnosis of depression sometime in their lifetime was 15.3% ($n = 10,775$). Of these, 32.5% ($n = 3,468$) reported being diagnosed in the past school year, 24.8% ($n = 2,647$) reported being currently in therapy for depression, and 34.9% ($n = 3,719$) reported currently taking medication for depression. During the past school year, 1.5% ($n = 1,088$) of students reported attempting suicide at least once, and 9.8% ($n = 6,971$) reported seriously considering suicide at least once. For further data on students' reports of mental health difficulties in the past school year, see Table 17.

Several questions asked students about issues of physical health, including incidence of infectious disease and preventive measures. Responses provided the following percentages:

- 18.1% ($n = 12,604$) reported using sunscreen daily;
- 7.1% ($n = 4,996$) reported getting enough sleep to wake feeling rested every day during the past week;
- 28.9% ($n = 20,450$) reported getting enough sleep to wake feeling rested on at least 5 of the past 7 days;
- 77.7% ($n = 54,799$) reported having had a dental examination and cleaning in the past year;
- 88.5% ($n = 61,792$) reported having their blood pressure checked within the past 2 years;
- 44.5% ($n = 31,058$) reported having their cholesterol checked in the past 5 years; and
- 0.3% ($n = 224$) reported having had hepatitis B or C in the past school year.

TABLE 17. Reported Number of Times Students Experienced Mental Health Difficulties in the Past School Year

Mental health difficulty	0		1–4		5–8		> 9	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Felt hopeless	25,989	36.7	27,609	39.0	7,933	11.2	9,239	13.1
Felt overwhelmed	4,841	6.8	22,675	32.0	17,766	25.1	25,472	36.0
Felt exhausted (not from physical activity)	6,431	9.1	22,688	32.1	17,030	24.1	24,591	34.8
Felt sad	14,702	20.8	31,767	45.0	11,287	16.0	12,887	18.2
Felt so depressed it was difficult to function	38,870	55.0	19,767	28.0	5,099	7.2	6,947	9.8
Seriously considered attempting suicide	63,837	90.2	5,431	7.7	662	0.9	878	1.2
Attempted suicide	69,582	98.5	838	1.2	113	0.2	137	0.2

Note. Refers to question 40: “Within the past school year, how many times have you...?”

TABLE 18. Top 10 Self-Reported Health Problems Students Experienced in the Past School Year

Health problem	Rank	Total		Women		Men	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Allergy	1	33,041	47.0	21,594	49.1	10,701	43.7
Back pain	2	32,802	47.0	21,845	49.8	10,243	42.2
Sinus infection	3	20,473	29.3	14,466	33.0	5,633	23.2
Depression	4	12,906	18.4	9,053	20.6	3,519	14.5
Strep throat	5	9,755	14.0	6,657	15.2	2,862	11.8
Anxiety disorder	6	9,397	13.4	7,168	16.3	2,001	8.2
Asthma	7	8,345	11.9	5,809	13.2	2,344	9.6
Ear infection	8	6,945	10.0	5,050	11.5	1,744	7.2
Seasonal Affective Disorder	9	5,365	7.7	3,862	8.8	1,429	5.9
Bronchitis	10	5,267	7.6	3,832	8.7	1,299	5.4

Note. Refers to question 43: “Within the past school year, have you had any of the following? (no, yes)”
We based rank order of reported health problems on total number of participants. Because of missing data by sex, the sum of the data from men’s and women’s responses does not always equal the total.

Table 18 shows the top 10 health problems reported by students within the past school year.

COMMENT

Limitations

First, the cross-sectional data collection may accurately describe patterns of association but not causality. Second, although students were selected randomly, data were collected at self-selected institutions rather than from a random sample of schools; therefore, the results cannot be generalized to college students nationally. Third, because institutions that were not members of ACHA were charged an additional fee to participate in the ACHA–NCHA, association member institutions are overrepresented (102 of 107 participating institutions) and may represent another source of bias. Also, campuses that chose to participate in the ACHA–NCHA may have done so

because of a perceived problem with student health or risk behaviors. Fourth, ACHA instructed participating institutions to collect data from students in 1 of 3 ways—from all students, from randomly selected students, or from students in randomly selected classrooms. Furthermore, campuses could use either the paper survey, Web-based survey, or both, and some campuses offered students an incentive to participate in the survey. A consistent means to collect data did not exist for all campuses; therefore, the results should be interpreted with caution, given this variation in data-collection methods.

This report is based on self-reported data and is subject to several sources of error. Participants who intentionally or unintentionally distorted their responses may represent a source of bias. Thus, recall bias and pressure to give socially desirable responses may represent sources of error. In addition, women were overrepresented and men were underrepresented in the sample. To minimize the impact of this potential

source of bias, data are presented in total, as well as for female and male participants separately, when appropriate.

Last, several items on the ACHA-NCHA assessed students' experiences during the past school year. Because of differences among campus academic year start dates and in the dates of ACHA-NCHA data collection, such items may measure a period of time ranging from 5 to 9 months. It is important to note this difference when comparing ACHA-NCHA data with similar items from surveys that ask for a 12-month recall.

Conclusions

Comprehensive data from the ACHA-NCHA spring 2007 reference group expand understanding of college students' health needs and capacities. These data also challenge all professionals engaged in advancing the health of college students to use evidence-based approaches in planning college health initiatives. Since March 2005, results from the ACHA-NCHA have been, and will continue to be, published regularly in the *Journal of American College Health*. The ACHA-NCHA survey instrument is available for use at postsecondary institutions for either spring or fall sampling and analysis.

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NOTE

For further information, visit the ACHA-NCHA Web site (<http://www.acha-ncha.org>).

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