American College Health Association–National College Health Assessment Spring 2008 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 2008 reference group includes ACHA–NCHA data from 80,121 students at 106 institutions of higher education. **Methods**: Officials at participating institutions administered the ACHA–NCHA to all students, randomly selected students, or students in randomly selected classrooms. ACHA collected data between January and May 2008. **Results**: Results from the spring 2008 reference group (N = 80,121) 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 4,300 degree-granting colleges and universities in the United States, enrolling 17.8 million students in fall 2006.[1] Of those students, 85% were enrolled in undergraduate programs, 13% 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 2008 survey implementation, the ACHA–NCHA has been used to collect data from 554,192 college students at 435 institutions of higher education. Reliability and validity analyses of the ACHA–NCHA are described in a previous article[3] 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 Education[5] 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 thirteen North American postsecondary institutions self-selected to participate in the spring 2008 ACHA–NCHA. Students on those campuses completed 83,070 surveys. The ACHA–NCHA spring 2008 reference

group included data only from institutions that used random sampling techniques, which yielded a final data set consisting of 80,121 students on 106 campuses. The results for this reference group are presented in this article. Results from the 2003–2007 data-collection periods have been previously published.[3,8–11]

Of the 106 campuses, 65 were public colleges or universities and 41 were private. The majority (101) were 4-year institutions. The number of students enrolled in the participating schools varied: 16 institutions had fewer than 2,500 students; 12 had 2,500–4,999 students; 18 had 5,000–9,999 students; 35 had 10,000–19,999 students; and 25 had 20,000 or more students. The geographic locations of the reporting institutions were also varied: 17 were in the Northeast, 18 were in the Midwest, 35 were in the South, and 32 were in the West. Four institutions were located in Canada. Campus locations also varied. Twenty-seven schools were in cities with populations greater than 500,000; 8 schools were in cities with populations between 250,000 and 499,999; 36 schools were in cities with populations between 50,000 and 249,999; 27 schools were in towns with populations between 10,000 and 49,999; 4 schools were in towns with populations between 2,500 and 9,999; and 4 schools were located in rural communities with populations of less than 2,500. Furthermore, 18 of the 106 schools were religiously affiliated—7 were Catholic institutions, and 8 more were Protestant or other Christian-affiliated. Six of the 106 institutions reported 1 or more types of minority status as designated by the US Department of Education: 1 school was a postsecondary minority institution, 1 school was a historically black college or university, 4 schools reported high Hispanic enrollment, 1 school was a Hispanic-serving institution, and 1 school was a Native Hawaiian-serving institution. Carnegie classification of the 106 institutions included 3 associates colleges, 17 baccalaureate colleges, 31 masters colleges and universities, 49 research institutions, 2 special focus institutions, and 4 schools that were not classified because they were located outside the US.

Sampling strategies included a mix of randomized classroom and Web-based surveying. The overall mean response proportion was 29%. The mean response proportion was 93% for schools administering paper surveys in randomly selected classrooms and 23% for schools conducting randomized Web-based surveying.

Of the 106 schools in this reference group, 96 used the ACHA–NCHA Web version (n = 72,893; 91%) and 10 used the ACHA–NCHA paper scan-form version of the survey (n = 7,228; 9%). Researchers conducted a systematic evaluation to compare the spring 2003 ACHA–NCHA scan form with the Web-based ACHA–NCHA.[12] 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 scan forms. Paper scan-form respondents estimated other students' cigarette use, Rohypnol (flunitrazepam) use, and number of sexual partners as 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 to 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 2008 ACHA–NCHA contained a number of questions to obtain students' demographic information. Several questions were also 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), 87.9% (n = 65,078) of students responded *yes*.

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

- 18.6% (n = 14,657) worked 1–9 hours a week for pay;
- 19.6% (n = 15,448) worked 10–19 hours a week for pay;
- 21.8% (n = 17,167) worked 20 hours or more a week for pay;
- 35.2% (n = 27,586) volunteered 1–9 hours a week;
- 2.9% (n = 2,250) volunteered 10–19 hours a week; and
- 1.0% (n = 805) 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:

- 72.0% (n = 56,011) carried no credit card debt or paid the full amount;
- 14.7% (n = 11,446) carried $1–$999 in credit card debt;
- 4.3% (n = 3,320) carried $1,000–$1,999 in credit card debt;
- 3.8% (n = 2,980) carried $2,000–$3,999 in credit card debt;
- 2.0% (n = 1,543) carried $4,000–$5,999 in credit card debt; and
- 3.2% (n = 2,501) 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.

TABLE 1. Demographic Characteristics of Survey Participants

Characteristic	*n*	%
Sex		
Female	50,949	65.0
Male	27,451	35.0
Age (y)		
18–20	39,499	50.1
21–29	33,890	43.0
≥ 30	5,500	7.0
Student status		
1st-year undergraduate	18,183	23.3
2nd-year undergraduate	16,129	20.7
3rd-year undergraduate	16,728	21.5
4th-year undergraduate	13,670	17.5
5th year or more	3,878	5.0
Graduate	8,435	10.8
Adult special/other	947	1.2
Full-time	74,286	94.8
International	3,803	4.8
Race or ethnicity (select all that apply)		
White, not Hispanic (includes Middle Eastern)	60,516	75.5
Black, not Hispanic	3,991	5.0
Hispanic or Latino	4,989	6.2
Asian or Pacific Islander	9,300	11.6
American Indian or Alaskan Native	1,247	1.6
Other	3,006	3.8
Membership in a social fraternity or sorority	8,250	10.5
Relationship status		
Single	43,433	55.1
Married/domestic partner	6,323	8.0
Engaged/committed dating relationship	28,196	35.8
Separated	256	0.3
Divorced	549	0.7
Widowed	64	0.1
Sexual orientation and gender identity		
Heterosexual	74,090	94.3
Gay/lesbian	1,535	2.0
Bisexual	1,820	2.3
Transgender	82	0.1
Unsure	1,024	1.3
Living situation		
Campus residence hall	30,134	38.2
Fraternity or sorority house	1,664	2.1
Other university housing	4,762	6.0
Off-campus housing	30,501	38.7
Parent/guardian's home	8,345	10.6
Other	3,400	4.3

Note. N = 80,121.

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

Rank	Health impediment	Total		Women		Men	
		n	%	*n*	%	*n*	%
1	Stress	26,640	33.9	18,981	37.5	7,391	27.2
2	Cold/flu/sore throat	22,632	28.8	15,710	31.0	6,711	24.7
3	Sleep difficulties	20,121	25.6	13,458	26.6	6,458	23.8
4	Concern for troubled friend or family member	14,719	18.8	10,570	20.9	3,988	14.7
5	Internet use/computer games	13,250	16.9	7,292	14.4	5,841	21.5
6	Depression/anxiety disorder/ SAD	12,660	16.1	9,137	18.1	3,392	12.5
7	Relationship difficulty	12,515	15.9	8,601	17.0	3,791	14.0
8	Sinus infection/ear infection/ bronchitis/strep throat	7,279	9.3	5,600	11.1	1,600	5.9
9	Death of a friend or family member	7,266	9.3	5,247	10.4	1,942	7.2
10	Alcohol use	6,163	7.8	3,492	6.9	2,589	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 the number of 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.

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: 91.9% (*n* = 73,371) said *good, very good*, or *excellent*; 6.9% (*n* = 5,497) said *fair*; and 1.0% (*n* = 807) said *poor*. Tables 3 and 4 provide findings related to students' sources of health-related information and the believability of those sources and to health information received from students' colleges or universities.

When asked about seat belt use during the past school year, 79.7% of students (*n* = 63,267) who rode in a car said they always wore a seat belt. When asked about helmet use during the past school year, 21.2% of students (*n* = 8,554) who rode a bicycle said they always wore a helmet, 74.3% of students (*n* = 8,707) who rode a motorcycle said they always wore a helmet, and 15.7% of students (*n* = 1,864) who used in-line skates said they always wore a helmet.

When asked about physical fights and assaults in the past school year, 6.0% of students (*n* = 4,798) reported having been in a physical fight and 3.5% (*n* = 2,789) 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, 8.5% of students (*n* = 6,727) 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, 45.5% of students (*n* = 36,051) 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 49.2% (*n* = 38,843) of those students reported exercising to strengthen or tone muscles on at least 2 of the past 7 days.

The mean estimated body mass index (BMI, in kg/m^2) was 23.7 for women (*SD* = 4.9) and 24.7 for men (*SD* = 4.5). Both values fall within the healthy weight range defined by the National Institutes of Health.[13] 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:

- 28.2% of students (*n* = 22,248) reported having ever been tested for HIV infection;
- 58.5% of women (*n* = 29,630) reported having had a routine gynecological examination in the past year;
- 15.3% of sexually active women (*n* = 5,386) reported having used emergency contraception within the past school year;
- 2.0% of female students (*n* = 692) who had had vaginal intercourse within the past school year reported having become pregnant unintentionally; and

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

Rank	Source of information	*n*	%
			Used
1	Internet/World Wide Web	61,651	78.2
2	Parent	59,354	75.5
3	Friend	48,018	61.1
4	Health center medical staff	47,732	60.6
5	Health educator	41,963	53.3
6	Magazine	40,203	51.1
7	Leaflet/pamphlet/flyer	40,279	51.0
8	Television	34,738	44.1
9	Faculty/coursework	31,556	40.2
10	Campus newspaper article	21,791	27.7
11	Campus peer educator	15,640	19.9
12	Resident assistant/advisor	13,553	17.3
13	Religious center	7,360	9.3
			Believable
1	Health center medical staff	70,932	89.9
2	Health educator	70,717	89.8
3	Faculty/coursework	53,591	68.1
4	Parent	51,412	65.2
5	Leaflet/pamphlet/flyer	46,651	59.0
6	Campus newspaper article	38,873	49.4
7	Campus peer educator	36,733	46.8
8	Resident assistant/advisor	28,721	36.6
9	Internet/World Wide Web	19,679	24.9
10	Friend	19,125	24.2
11	Religious center	17,572	22.3
12	Magazine	16,796	21.3
13	Television	9,769	12.4

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*)."

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

Information type	*n*	%
Alcohol and other drug-use prevention	41,101	51.3
Sexual assault/relationship violence prevention	37,986	47.4
Physical activity and fitness	31,836	39.7
Sexually transmitted disease prevention	28,958	36.1
Dietary behaviors and nutrition	26,064	32.5
AIDS or HIV infection prevention	20,901	26.1
Violence prevention	19,707	24.6
Tobacco-use prevention	18,508	23.1
Pregnancy prevention	18,098	22.6
Suicide prevention	12,839	16.0
Injury prevention and safety	12,663	15.8
None of the above	18,165	22.7

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*)."

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

	Total		Women		Men	
Sexual assault behavior	*n*	%	*n*	%	*n*	%
Verbal threats for sex against your will	2,544	3.2	1,866	3.7	615	2.2
Sexual touching against your will	6,362	8.0	5,198	10.2	1,041	3.8
Attempted sexual penetration against your will	2,158	2.7	1,874	3.7	243	0.9
Sexual penetration against your will	1,174	1.5	954	1.9	192	0.7

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

	Total		Women		Men	
Type of abusive relationship	*n*	%	*n*	%	*n*	%
Emotional	9,858	12.4	7,257	14.3	2,396	8.8
Physical	1,559	2.0	1,082	2.1	426	1.6
Sexual	1,216	1.5	890	1.8	284	1.0

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

		Total		Women		Men	
BMI	Category	*n*	%	*n*	%	*n*	%
< 18.5	Underweight	3,439	4.4	2,755	5.5	652	2.4
18.5–24.9	Healthy weight	49,534	63.7	33,445	66.7	15,720	58.2
25–29.9	Overweight	17,006	21.9	9,117	18.2	7,728	28.6
30–34.9	Class I obesity	5,004	6.4	2,924	5.8	2,028	7.5
35–39.9	Class II obesity	1,747	2.2	1,132	2.3	599	2.2
≥ 40	Class III obesity	1,053	1.4	758	1.5	284	1.1

Note. BMI = weight (kg) / height squared (m^2). 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 8. Students' Reported Descriptions of Weight

	Total		Women		Men	
Response	*n*	%	*n*	%	*n*	%
Very underweight	488	0.6	199	0.4	273	1.0
Slightly underweight	7,290	9.2	3,410	6.7	3,742	13.7
About the right weight	43,322	54.7	27,808	54.9	14,821	54.5
Slightly overweight	24,845	31.4	16,860	33.3	7,607	27.9
Very overweight	3,226	4.1	2,395	4.7	776	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	
	n	%	*n*	%	*n*	%
Exercise to lose weight	45,163	56.4	31,990	62.8	12,480	45.4
Diet to lose weight	28,478	35.5	21,448	42.1	6,611	24.1
Vomit or take laxatives to lose weight	1,866	2.3	1,668	3.3	171	0.6
Take diet pills to lose weight	2,449	3.1	1,933	3.8	477	1.7

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.

• 2.1% of male students (*n* = 391) who had had vaginal intercourse within the past school year reported having gotten someone pregnant unintentionally.

Although 76.3% of students (*n* = 60,196) reported having had 0 or 1 sexual (oral, anal, or vaginal) partners in the past school year, only 17.2% (*n* = 13,372) 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:

• 44.3% of students (*n* = 34,679) reported having had oral sex 1 or more times, although 93.6% (*n* = 72,745) thought the typical student had had oral sex 1 or more times in the past 30 days;

• 48.9% of students (*n* = 38,211) reported having had vaginal intercourse 1 or more times, but 94.6% of respondents (*n* = 73,519) thought the typical student had had vaginal sex 1 or more times in the past 30 days; and

• 4.7% of students (*n* = 3,645) reported having had anal intercourse 1 or more times, whereas 57.3% of respondents (*n* = 44,334) 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 66.0% of students (*n* = 52,584) reported never using cigarettes, only 15.6% (*n* = 12,422) thought the typical student never used cigarettes. In addition, 17.4% (*n* = 13,851) reported never using alcohol, yet 3.7% (*n* = 2,928) thought the typical student never used alcohol. Likewise, 65.0% of students (*n* = 51,623) reported never using marijuana, although 20.0% (*n* = 15,831) 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.[14] Furthermore, all 50 states and the District of Columbia have laws banning driving with a BAC of 0.08% or higher.[15] Variables on the ACHA–NCHA (the reported

TABLE 10. Reported Types of Contraception Students Used the Last Time They Engaged in Vaginal Intercourse

Contraceptive method	Total		Women		Men	
	n	%	*n*	%	*n*	%
Birth control pills	32,042	40.0	21,201	41.6	10,364	37.8
Condoms (male or female)	30,575	38.2	18,772	36.8	11,302	41.2
Withdrawal	12,097	15.1	8,016	15.7	3,906	14.2
Fertility awareness	2,045	2.6	1,330	2.6	692	2.5
Spermicide	1,937	2.4	1,049	2.1	860	3.1
Depo Provera	982	1.2	672	1.3	301	1.1
Diaphragm/cervical cap/sponge	380	0.5	181	0.4	190	0.7
Norplant	356	0.4	146	0.3	205	0.7
Other method	3,716	4.6	2,760	5.4	904	3.3
Nothing	3,220	4.0	1,926	3.8	1,218	4.4
Have not had vaginal intercourse	18,715	23.4	12,158	23.9	6,271	22.8
Did not answer or skipped question	6,637	8.3	3,434	6.7	2,669	9.7

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.

number of drinks consumed the last time students partied or socialized and 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.[16] The mean estimated BAC was 0.069% (*SD* = 0.080) for female students and 0.067% (*SD* = 0.081) for male students. Excluding students who do not drink and students who do not drive, 34.1% (*n* = 18,716) 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 in their lifetime was 14.9% (*n* = 11,777). Of these, 32.0% (*n* = 3,746) reported being diagnosed in the past school year, 24.5% (*n* = 2,870) reported being currently in therapy for depression, and 35.6% (*n* = 4,157) reported currently taking medication for depression. During the past school year, 1.3% (*n* = 1,004) of students

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

	Total		Women		Men	
Sexual intercourse	*n*	%	*n*	%	*n*	%
Oral	2,234	4.0	1,337	3.8	849	4.4
Vaginal	28,459	53.5	17,394	50.6	10,603	59.0
Anal	4,245	27.7	2,012	22.3	2,147	35.4

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 who reported 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

	Total		Women		Men	
STI/STD	*n*	%	*n*	%	*n*	%
Genital warts/human papillomavirus	1,907	2.4	1,542	3.1	341	1.3
Genital herpes	768	1.0	602	1.2	154	0.6
Chlamydia	707	0.9	514	1.0	177	0.7
Pelvic inflammatory disease	248	0.3	184	0.4	58	0.2
HIV	200	0.3	91	0.2	100	0.4
Gonorrhea	178	0.2	81	0.2	89	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

	Total		Women		Men	
Number of drinks	*n*	%	*n*	%	*n*	%
0	17,435	22.1	11,133	22.1	5,972	22.0
1–4	31,749	40.2	23,402	46.5	7,840	28.8
5–8	20,620	26.1	12,847	25.5	7,385	27.2
9 or more	9,203	11.6	2,982	5.9	5,984	22.0

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.

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

	Total		Women		Men	
Behavior	*n*	%	*n*	%	*n*	%
Eat before and/or during drinking	51,475	82.1	33,360	83.2	17,212	80.2
Use a designated driver	48,010	79.9	32,201	83.5	14,971	73.3
Keep track of how many drinks you were having	41,394	66.5	28,363	71.3	12,353	57.8
Determine in advance not to exceed a set number of drinks	24,578	39.4	17,302	43.5	6,845	32.0
Avoid drinking games	23,814	38.0	16,598	41.3	6,820	31.8
Alternate nonalcoholic with alcoholic beverages	20,001	32.1	14,199	35.6	5,458	25.6
Pace your drinks to 1 or fewer per hour	18,869	30.3	14,348	36.1	4,198	19.7
Have a friend let you know when you've had enough	16,802	27.3	12,183	31.1	4,274	20.2
Choose not to drink alcohol	16,746	25.5	11,926	28.2	4,516	20.3
Drink an alcohol look-alike (eg, nonalcoholic beer, punch)	4,522	7.2	3,480	8.6	952	4.4

Note. Refers to question 17: "During the past school year, if you 'partied/socialized,' did you always or usually . . . ?" We excluded students who reported *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

	Total		Women		Men	
Consequence	*n*	%	*n*	%	*n*	%
Did something you later regretted	22,143	35.4	13,723	34.3	7,985	37.2
Forgot where you were or what you did	19,355	30.9	11,569	29.0	7,405	34.5
Physically injured yourself	11,640	18.6	7,324	18.3	4,069	18.9
Had unprotected sex	9,032	14.5	5,329	13.4	3,525	16.5
Were involved in a fight	3,691	5.9	1,583	4.0	2,004	9.3
Physically injured another person	2,435	3.9	1,037	2.6	1,317	6.1
Someone used force or threat of force to have sex with you	800	1.3	627	1.6	143	0.7

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 who reported *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.

reported attempting suicide at least once and 9.0% (n = 7,141) 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:

- 18.7% (n = 14,734) reported using sunscreen daily;
- 6.9% (n = 5,438) reported getting enough sleep to wake feeling rested every day during the past week;
- 30.3% (n = 23,982) reported getting enough sleep to wake feeling rested on at least 5 of the past 7 days;
- 77.6% (n = 61,318) reported having had a dental examination and cleaning in the past year;
- 89.2% (n = 70,321) reported having their blood pressure checked within the past 2 years;
- 45.0% (n = 35,460) reported having their cholesterol checked in the past 5 years; and
- 0.3% (n = 228) reported having had hepatitis B or C in the past school year.

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

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

					No. of days											
	Never used		Not used in past month		1–2		3–5		6–9		10–19		20–29		All 30	
Substance	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Alcohol	13,851	17.4	10,853	13.7	14,988	18.9	15,012	18.9	13,023	16.4	9,273	11.7	2,134	2.7	335	0.4
Cigarettes	52,584	66.0	14,431	18.1	4,227	5.3	1,655	2.1	1,006	1.3	1,474	1.8	1,481	1.9	2,871	3.6
Smokeless tobacco	69,974	88.7	6,163	7.8	942	1.2	440	0.6	318	0.4	369	0.5	293	0.4	395	0.5
Cigars	58,375	73.4	16,942	21.3	3,180	4.0	524	0.7	206	0.3	170	0.2	80	0.1	73	0.1
Marijuana	51,623	65.0	16,317	20.5	4,590	5.8	1,918	2.4	1,337	1.7	1,498	1.9	1,299	1.6	876	1.1
Amphetamines	74,569	93.7	3,450	4.3	572	0.7	264	0.3	226	0.3	213	0.3	141	0.2	187	0.2
Cocaine	74,611	93.7	3,891	4.9	695	0.9	227	0.3	97	0.1	44	0.1	14	0.0	37	0.0
Rohypnol, GHB, or liquid X (intentional use)	78,890	99.1	618	0.8	40	0.1	6	0.0	8	0.0	9	0.0	6	0.0	27	0.0
Ecstasy (MDMA)[a]	69,072	95.4	2,964	4.1	305	0.4	45	0.1	18	0.0	5	0.0	7	0.0	12	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. MDMA = 3,4-methylenedioxymethamphetamine.
[a]We measured ecstasy use only among respondents using the American College Health Association–National College Health Assessment Web survey ($N = 72,893$).

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

Mental health difficulty	0 times		1–4 times		5–8 times		> 9 times	
	n	%	*n*	%	*n*	%	*n*	%
Felt hopeless	30,010	37.9	30,736	38.8	8,753	11.0	9,719	12.3
Felt overwhelmed	5,017	6.3	24,876	31.4	20,239	25.5	29,114	36.7
Felt exhausted (not from physical activity)	6,457	8.2	25,134	31.7	19,410	24.5	28,200	35.6
Felt sad	16,811	21.3	36,395	46.0	12,223	15.5	13,673	17.3
Felt so depressed it was difficult to function	45,109	57.0	21,614	27.3	5,396	6.8	7,030	8.9
Seriously considered attempting suicide	72,145	91.0	5,624	7.1	696	0.9	821	1.0
Attempted suicide	78,075	98.7	788	1.0	103	0.1	113	0.1

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	
		n	%	*n*	%	*n*	%
Allergy	1	37,828	47.9	25,316	50.0	12,007	44.1
Back pain	2	36,324	46.1	24,655	48.8	11,247	41.5
Sinus infection	3	24,188	30.7	17,321	34.2	6,594	24.4
Depression	4	13,370	17.0	9,385	18.6	3,800	14.0
Strep throat	5	10,822	13.8	7,445	14.7	3,244	12.0
Anxiety disorder	6	10,411	13.2	7,973	15.8	2,311	8.5
Asthma	7	9,244	11.7	6,593	13.1	2,522	9.3
Ear infection	8	7,473	9.5	5,475	10.8	1,900	7.0
Bronchitis	9	6,423	8.2	4,692	9.3	1,659	6.1
Seasonal affective disorder	10	6,318	8.0	4,561	9.0	1,688	6.2

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.

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 (98 of 106 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, randomly selected students, or 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

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 2008 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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