American College Health Association National College Health Assessment Spring 2006 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 developed by the ACHA 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 2006 Reference Group includes ACHA-NCHA data from 94,806 students at 117 institutions of higher education. **Method Summary**: Officials at participating institutions administered the ACHA-NCHA to all students, to randomly selected students, or to students in randomly selected classrooms. Data were collected between January and May 2006. **Results**: Results from the Spring 2006 Reference Group (N = 94,806) are presented. **Conclusions**: Data from the ACHA-NCHA Spring 2006 Reference Group expand the understanding of the health needs and capacities of college students.

Key Words: American College Health Association-National College Health Assessment, assessment, college health, evidence-based, health behaviors, research, student learning, Web-based survey

According to the US Department of Education, there are more than 4,000 colleges and universities in the United States.[1] In fall 2004, Title IV institutions in the United States enrolled 17.3 million students.[2] Of those, 86% were enrolled in undergraduate programs, 12% were enrolled in graduate programs, and 2% were enrolled in first-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. 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.[3] Further information about the ACHA is available at www.acha.org.

In 1998, the 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 students' health behaviors, health indicators, and perceptions. The development of the ACHA-NCHA has been described in a previously published article.[4] From its inception in spring 2000, through the spring 2006 survey implementation, the ACHA-NCHA has been used to collect data from 255,974 college students at 332 institutions of higher education. Reliability and validity analyses of the ACHA-NCHA are described in a previously published article[4] and in an unpublished ACHA report.[5]

The ACHA-NCHA has ties to 2 other important documents distributed by the ACHA: Standards of Practice for Health Promotion in Higher Education and Healthy Campus 2010: Making It Happen. Standard 5 of the 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.[6] 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 colleges and universities use to set goals for improving students' health.[7] 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.[8]

METHODS

One hundred twenty-three North American postsecondary institutions self-selected to participate in the Spring

2006 ACHA-NCHA. Students on those campuses completed 97,357 surveys. The ACHA-NCHA Spring 2006 Reference Group included data from only those institutions that used random sampling techniques, which yielded a final data set consisting of 94,806 students on 117 campuses. The results for this reference group are presented in this article. Results from the 2003–2005 data collection periods have been previously published. [4,9,10]

Of the 117 campuses included in the Spring 2006 Reference Group, 72 were public colleges or universities and 45 were private. The majority, 113 of 117, were 4-year institutions. Numbers of students enrolled in the participating schools varied: 16 had fewer than 2,500 students; 14 had 2,500–4,999 students; 26 had 5,000–9,999 students; 37 had 10,000–19,999; and 24 schools had 20,000 or more students. Also varied were the geographic locations of the reporting institutions: 26 were in the Northeast, 29 were in the Midwest, 26 were in the South, and 32 were in the West. Four institutions were located in Canada. There was also variation in campus locations of participating institutions. Seventeen schools were in urban areas with populations greater than 1,000,000; 37 schools were in urban areas with populations between 100,000 and 1,000,000; 24 schools were in suburban areas; 35 schools were in rural areas; and 4 schools described their setting as "other."

Sampling strategies included a mix of randomized classrooms, and randomized Web-based surveying. The overall mean response proportion was 35.0%. The mean response proportion was 85.8% for schools administering paper surveys in randomly selected classrooms, and 23.2% for schools conducting randomized Web-based surveying.

Of the 117 schools in this reference group, 92 used the ACHA-NCHA Web version (n = 75,648, or 79.8% of the sample), 22 used the ACHA-NCHA paper scan form version of the survey (n = 16,833, or 17.8% of the sample), and 3 schools administered both paper and Web-based surveys (n = 2,325, or 2.5% of the sample). Researchers conducted a systematic evaluation to compare the ACHA-NCHA scan form with the Web-based ACHA-NCHA.[11] There were statistically significant differences observed 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 crosstabulations and mean differences when conducting t tests. The results demonstrate, on average, a contingency coefficient of .05 among the 218 crosstabulations conducted, and a mean difference of .33 among the 45 t tests conducted. The evaluation indicated that the largest differences, albeit miniscule, were observed on 2 demographic and 4 perception variables. Online respondents were slightly younger, more likely to live in campus housing, and estimated other students' alcohol use as higher than those respondents who used the paper scanforms. Paper scanform respondents estimated other students' cigarette use, Rohypnol (flunitrazepam) use, and their number of sexual partners as higher than those respondents who used the online version of the survey. Because researchers from the ACHA observed so few meaningful differences in survey item comparisons, they combined data from paper and Web-based surveys in this report.

The ACHA scanned the paper surveys, hosted the ACHA-NCHA Web survey, and produced all reports for the participating institutions. The 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 that affect 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 2006 ACHA-NCHA contains a number of questions to obtain demographic information from college students. In addition, several questions are related to aspects of student life that may have an impact on health status, which are not often identified as typical health issues. The following are findings from these questions:

When asked if they had any kind of health insurance (including prepaid plans such as HMOs), 87.3% (n = 76,466) of students responded "yes."

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

- 18.1% (n = 16,688) worked between 1 and 9 hours a week for pay;
- 19.2% (n = 17,686) worked between 10 and 19 hours a week for pay;
- 22.9% (n = 21,056) worked 20 hours or more a week for pay;
- 33.3% (n = 30,502) volunteered between 1 and 9 hours a week;
- 2.7% (n = 2,518) volunteered between 10 and 19 hours a week;
- 1.2% (n = 1,113) volunteered 20 hours or more a week.

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

- 71.6% (n = 65,260) carried no credit card debt in the past month, or paid the full amount;
- 15.0% (n = 13,674) carried between $1and $999 in credit card debt in the past month;
- 4.3% (n = 3,943) carried between $1,000 and $1,999 in credit card debt in the past month;

- 4.0% (n = 3,602) carried between $2,000 and $3,999 in credit card debt in the past month;
- 2.0% (n = 1,835) carried between $4,000 and $5,999 in credit card debt in the past month; and
- 3.1% (n = 2,842) carried $6,000 or more in credit card debt in the past month.

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 Spring 2006 ACHA-NCHA survey, 8 questions asked about topics identified as health, health education, and safety concerns. Students were asked about 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: 91.7% (n = 86,546) said good, very good, or excellent; 7.1% (n = 6,671) said fair; and 1.0% (n = 948) said poor. Data in Tables 3 and 4 provide findings related to health information received from students' colleges or universities as well as students' sources of health-related information and the believability of those sources.

When asked about seat belt use during the past school year, 75.7% of students (n = 70,882) who rode in a car said they always wore a seat belt. When asked about helmet use during the past school year, students' responses indicated that 21.3% of students (n = 9,660) who rode a bicycle said they always wore a helmet; 68.3% of students (n = 9,309) who rode a motorcycle said they always wore a helmet, and 11.4% of students (n = 1,905) who used in-line skates said they always wore a helmet.

When asked about physical fights and assaults, 6.2% of students (n = 5,837) reported having been in a physical fight in the past school year, and 3.5% of students (n = 3,319) reported having been physically assaulted (sexual assault not included) in the past school year. Tables 5 and 6 provide information on the types of sexual assaults and abusive relationships (ie, emotionally, physically, or sexually abusive) students reported experiencing in the past school year.

Weight, Nutrition, and Exercise

In the Spring 2006 ACHA-NCHA survey, 5 questions examined weight, nutrition, and exercise. The following data are findings from this section. Overall, 7.9% of students (n = 7,323) reported that they ate 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/vegetables, three-fourths cup fruit/vegetable juice, small bowl of salad greens, or one-half cup of dried fruit.)

In terms of physical activity, 44.2% of students (n = 41,221) reported that they exercised vigorously for at least 20 minutes or moderately for at least 30 minutes on at least 3 out of the past 7 days, and 47.7% of students (n = 44,373) reported that they exercised to strengthen or tone muscles at least 2 out of the past 7 days.

The mean estimated body mass index (BMI; BMI = weight in kilograms divided by height, in meters squared)

TABLE 1. Demographic Characteristics of Participants in the ACHA-NCHA

Characteristic	Total	
	n	%
Sex		
Female	57,903	63.4
Male	33,476	36.6
Age		
18–20 years	44,105	47.7
21–29 years	41,078	44.4
> 30 years	7,281	7.9
Year in school		
1st year undergraduate	20,341	22.4
2nd year undergraduate	18,848	20.7
3rd year undergraduate	17,446	19.2
4th year undergraduate	14,284	15.7
5th year or more	4,007	4.4
Graduate	14,850	16.3
Adult special/other	1,162	1.3
Full-time student status	87,140	94.8
Race or ethnicity (select all that apply)		
White, not Hispanic (includes Middle Eastern)	68,982	72.8
Black, not Hispanic	4,835	5.1
Hispanic or Latino	5,801	6.1
Asian or Pacific Islander	10,939	11.5
American Indian or Alaskan Native	1,174	1.2
Other	3,372	3.6
International student status	6,495	7.1
Membership in a social fraternity or sorority	7,917	8.6
Current relationship status		
Single	49,353	53.4
Married/domestic partner	8,672	9.4
Engaged/committed dating relationship	33,304	36.0
Separated	326	0.4
Divorced	654	0.7
Widowed	94	0.1
Sexual orientation and gender identity		
Heterosexual	86,680	94.1
Gay/lesbian	1,838	2.0
Bisexual	2,207	2.4
Transgender	82	0.1
Unsure	1,326	1.4
Living situation		
Campus residence hall	36,378	39.4
Fraternity or sorority house	1,632	1.8
Other university housing	5,932	6.4
Off-campus housing	35,858	38.8
Parent/guardian's home	8,518	9.2
Other	4,042	4.4

Note. N = 94,806.

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

Rank	Health impediments	Total		Female		Male	
		n	%	*n*	%	*n*	%
1	Stress	29,338	32.0	20,354	35.6	8,490	25.8
2	Cold/flu/sore throat	23,857	26.0	16,369	28.6	7,095	21.6
3	Sleep difficulties	21,957	23.9	14,296	24.9	7,321	22.3
4	Concern for troubled friend or family member	16,552	18.0	11,552	20.2	4,728	14.4
5	Depression/anxiety disorder/SAD	14,378	15.7	10,149	17.8	4,017	12.2
6	Relationship difficulty	14,304	15.6	9,444	16.5	4,652	14.2
7	Internet use/computer games	14,104	15.4	7,243	12.7	6,652	20.3
8	Death of a friend or family member	7,823	8.5	5,518	9.6	2,157	6.6
9	Sinus infection/ear infection/bronchitis/ strep throat	7,618	8.3	5,775	10.1	1,713	5.2
10	Alcohol use	6,755	7.3	3,575	6.2	3,021	9.2

Note. Refers to question 44: "Within the last 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*)." Rank order of impediments to academic performance is based on total subjects. SAD = seasonal affective disorder. Because of missing data by sex, the sum of the female and male responses does not always equal the total.

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

Rank	Source of Information	*n*	%
	Used		
1	Parents	67,364	73.2
2	Internet/World Wide Web	66,775	72.4
3	Friends	55,723	60.6
4	Health center medical staff	55,050	59.7
5	Magazines	48,323	52.5
6	Health educators	47,490	51.6
7	Leaflets, pamphlets, flyers	47,619	51.5
8	Television	39,818	43.2
9	Faculty/coursework	34,707	37.8
10	Campus newspaper articles	24,551	26.7
11	Campus peer educators	16,852	18.4
12	Resident assistants/advisors	15,472	16.9
13	Religious center	9,072	9.9
	Believable		
1	Health center medical staff	83,477	90.1
2	Health educators	82,511	89.2
3	Faculty/coursework	61,138	66.3
4	Parents	59,505	64.3
5	Leaflets, pamphlets, flyers	56,489	60.8
6	Campus newspaper articles	43,438	47.0
7	Campus peer educators	42,416	46.1
8	Resident assistants/advisors	33,064	36.0
9	Friends	22,569	24.4
10	Religious center	22,387	24.2
11	Internet/world wide web	21,285	23.0
12	Magazines	20,366	22.0
13	Television	11,728	12.6

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	Total	
	n	%
Alcohol and other drug use prevention	44,316	46.7
Sexual assault/relationship violence prevention	42,000	44.3
Sexually transmitted disease prevention	33,909	35.8
Physical activity and fitness	34,357	36.2
Dietary behaviors and nutrition	29,308	30.9
AIDS or HIV infection prevention	26,549	28.0
Tobacco use prevention	21,350	22.5
Pregnancy prevention	21,332	22.5
Violence prevention	19,890	21.0
Suicide prevention	13,826	14.6
Injury prevention and safety	13,177	13.9
None of the above	24,493	25.8

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

Sexual assault behavior	Total		Female		Male	
	n	%	*n*	%	*n*	%
Verbal threats for sex against your will	3,185	3.4	2,246	3.9	790	2.4
Sexual touching against your will	7,867	8.4	6,179	10.7	1,408	4.2
Attempted sexual penetration against your will	2,517	2.7	2,081	3.6	325	1.0
Sexual penetration against your will	1,341	1.4	1,028	1.8	247	0.7

Note. Refers to question 7: "Within the last school year, have you experienced...? (*No, Yes*)" Because of missing data by sex, the sum of the female and male responses do not always equal the total.

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

Type of abusive relationship	Total		Female		Male	
	n	%	*n*	%	*n*	%
Emotionally	11,408	12.1	8,016	13.9	2,991	9.0
Physically	1,781	1.9	1,198	2.1	477	1.4
Sexually	1,423	1.5	996	1.7	361	1.1

Note. Refers to question 8: "Within the last school year, have you been in a relationship that was...? (*No, Yes*)" Because of missing data by sex, the sum of the female and male responses do not always equal the total.

was 23.6 kg/m2 for women (*SD* = 4.8) and 24.7 kg/m^2 for men (*SD* = 4.4). Both of these BMI values fall within the healthy weight range as defined by the National Institutes of Health.[12] BMI was calculated based on the students' self-reported heights and weights. Tables 7, 8, and 9 provide results related to estimated BMI and BMI classifications, students' descriptions of their weight, and reported weight-loss behaviors.

Sexual Behavior, Perceptions, and Contraception

The Spring 2006 ACHA-NCHA survey contains 13 questions about students' sexual behavior, their perceptions of their peers' sexual behavior, and contraception use. The following are highlights of findings from this section:

- 28.4% of students (*n* = 26,333) reported having ever been tested for HIV infection;

TABLE 7. Estimated Body Mass Index (BMI) and Classifications Based on Student's Reported Height and Weight

BMI category	Total		Female		Male	
	n	%	*n*	%	*n*	%
< 18.5 Underweight	4,092	4.5	3,199	5.6	840	2.6
18.5–24.9 Healthy Weight	58,077	64.1	38,304	67.6	19,045	58.2
25–29.9 Overweight	19,809	21.9	10,102	17.8	9,439	28.8
30–34.9 Class I Obesity	5,635	6.2	3,113	5.5	2,424	7.4
35–39.9 Class II Obesity	1,890	2.1	1,143	2.0	694	2.1
> 40 Class III Obesity	1,075	1.2	778	1.4	276	0.8

Note. BMI = weight [in kg] / height squared [in m^2]. Because of missing data by sex, the sum of the female and male responses do not always equal the total.

TABLE 8. Students' Reported Descriptions of Weight

Response	Total		Female		Male	
	n	%	*n*	%	*n*	%
Very underweight	659	0.7	248	0.4	383	1.2
Slightly underweight	9,072	9.8	4,076	7.1	4,750	14.4
About the right weight	49,443	53.1	30,513	53.1	17,571	53.2
Slightly overweight	30,203	32.5	20,002	34.8	9,389	28.4
Very overweight	3,663	3.9	2,617	4.6	935	2.8

Note. Refers to question 35: "How do you describe your weight?" Because of missing data by sex, the sum of the female and male responses do not always equal the total.

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

Behavior	Total		Female		Male	
	n	%	*n*	%	*n*	%
Exercise to lose weight	52,331	55.2	36,278	62.7	14,626	43.7
Diet to lose weight	32,751	34.5	24,532	42.4	7,389	22.1
Vomit or take laxatives to lose weight	2,357	2.5	2,075	3.6	220	0.7
Take diet pills to lose weight	3,429	3.6	2,672	4.6	652	1.9

Note. Refers to question 37: "Within the last 30 days, did you do any of the following? (*select all that apply*)" Because of missing data by sex, the sum of the female and male responses do not always equal the total.

- 59.4% of women (n = 34,132) reported having had a routine gynecological examination in the past year;
- 12.1% of sexually active women (n = 4,807) reported having used emergency contraception within the past school year;
- 2.0% of female students (n = 789) who had had vaginal intercourse within the past school year reported having become pregnant unintentionally; and
- 2.2% of male students (n = 508) who had had vaginal intercourse within the past school year reported having gotten someone pregnant unintentionally.

Although 75.8% of students (n = 70,407) reported having had 0 or 1 sexual (oral, anal, or vaginal) partners in the past school year, 17.7% of students (n = 16,165) 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 sexual behaviors:

- In the past 30 days, 45.2% of students (n = 40,881) reported having had oral sex 1 or more times, although 93.1% of respondents (n = 83,497) thought the typical student had had oral sex 1 or more times in the past 30 days;

- 48.8% of students (n = 44,095) reported having had vaginal intercourse 1 or more times in the past 30 days, but 93.9% of respondents (n = 84,211) thought the typical student had had vaginal sex 1 or more times in the past 30 days; and
- 4.7% of students (n = 4,225) reported having had anal intercourse 1 or more times in the past 30 days, whereas 58.0% of respondents (n = 51,762) thought the typical student had had anal sex 1 or more times in the past 30 days.

Data in Tables 10, 11, and 12 provide results related to students' contraception and condom use as well as reported

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

Contraceptive method	Total		Female		Male	
	n	%	*n*	%	*n*	%
Birth control pills	36,072	38.0	23,030	39.8	12,041	36.0
Condoms (male or female)	35,191	37.1	20,837	36.0	13,378	40.0
Withdrawal	13,126	13.8	8,336	14.4	4,406	13.2
Fertility awareness	2,441	2.6	1,478	2.6	900	2.7
Spermicide	2,348	2.5	1,272	2.2	1,026	3.1
Depo Provera	1,452	1.5	998	1.7	405	1.2
Diaphragm/cervical cap/sponge	437	0.5	236	0.4	185	0.6
Norplant	215	0.2	67	0.1	137	0.4
Other method	4,194	4.4	2,943	5.1	1,114	3.3
Nothing	3,813	4.0	2,156	3.7	1,495	4.5
Have not had vaginal intercourse	22,302	23.5	14,171	24.5	7,593	22.7
Did not answer or skipped question	8,064	8.5	3,747	6.5	3,302	9.9

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 female and male responses do not always equal the total.

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

Sexual intercourse	Total		Female		Male	
	n	%	*n*	%	*n*	%
Oral	2,469	3.8	1,331	3.3	1,004	4.2
Vaginal	32,640	52.1	19,223	49.5	12,485	56.7
Anal	5,035	27.7	2,323	22.5	2,553	35.0

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*)." Students reporting "Never did this sexual activity" were excluded from the analysis. Because of missing data by sex, the sum of the female and male responses do not always equal the total.

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

STI/STD	Total		Female		Male	
	n	%	*n*	%	*n*	%
Genital warts/HPV	2,060	2.2	1,594	2.8	421	1.3
Genital herpes	892	1.0	645	1.1	222	0.7
Chlamydia	711	0.8	497	0.9	184	0.6
Pelvic Inflammatory Disease	302	0.3	231	0.4	59	0.2
HIV	253	0.3	112	0.2	133	0.4
Gonorrhea	204	0.2	98	0.2	99	0.3

Note. Refers to question 43: "Within the last school year, have you had any of the following? (*No, Yes*)" Because of missing data by sex, the sum of the female and male responses do not always equal the total. STI/STD = sexually transmitted infection/sexually transmitted disease; HPV = human papillomavirus; HIV = human immunodeficiency virus.

incidence of sexually transmitted infection, disease, or complications.

Alcohol, Tobacco, and Other Drug Use

The Spring 2006 ACHA-NCHA survey asked 11 questions about alcohol, tobacco, and other drug use. Responses indicated that although 64.9% of students (n = 61,094) reported they never used cigarettes, only 14.3% of students (n = 13,354) thought the typical student never used cigarettes. In addition, 17.2% of students (n = 16,124) reported never using alcohol, yet 3.6% of students (n = 3,329) thought the typical student never used alcohol. Likewise, 65.5% of students (n = 61,492) reported they never used marijuana, although 20.4% of students (n = 19,095) 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 above.[13] Furthermore, all 50 states and the District of Columbia have laws indicating that driving with a BAC of 0.08% or higher is illegal.[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, using 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 estimated BAC for female students was 0.070% (SD = 0.082) and the estimated BAC for male students was 0.067% (SD = 0.085). Excluding students who do not drink and students who do not drive from the analysis, 34.1% (n = 21,279) of the students reported that they drove after drinking any alcohol at all during the past 30 days. See Tables 13, 14, 15, and 16 for findings on students' alcohol and drug use, alcohol-related protective behaviors, and the consequences students reported as a result of their drinking.

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

	Total		Female		Male	
Number of drinks	*n*	%	*n*	%	*n*	%
0	20,037	21.5	12,237	21.4	7,170	21.7
1–4	37,807	40.5	26,795	46.8	9,962	30.1
5–8	23,972	25.7	14,565	25.5	8,671	26.2
9 or more	11,459	12.3	3,624	6.3	7,289	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 female and male responses do not always equal the total.

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

	Total		Female		Male	
Behavior	*n*	%	*n*	%	*n*	%
Eat before and/or during drinking	58,754	79.0	36,877	80.6	20,146	76.6
Use a designated driver	51,818	75.3	34,072	80.2	16,177	67.0
Keep track of how many drinks you were having	47,986	65.1	31,904	70.4	14,763	56.4
Avoid drinking games	31,191	42.2	20,535	45.1	9,819	37.6
Determine, in advance, not to exceed a set number of drinks	26,720	36.1	18,178	40.0	7,699	29.4
Alternate nonalcoholic with alcoholic beverages	22,253	30.1	15,093	33.2	6,528	25.0
Pace your drinks to 1 or fewer per hour	21,494	29.2	15,747	34.8	5,120	19.6
Have a friend let you know when you've had enough	19,250	26.5	13,585	30.4	4,943	19.1
Choose not to drink alcohol	19,339	24.8	13,265	27.5	5,438	20.0
Drink an alcohol look-alike (nonalcoholic beer, punch, etc.)	4,927	6.6	3,510	7.6	1,221	4.7

Note. Refers to question 17: "During the last school year, if you 'partied/socialized,' did you always or usually...?" Students reporting "not applicable/don't drink" were excluded from the analysis. Because of missing data by sex, the sum of the female and male responses do not always equal the total.

TABLE 15. Reported Substance Use Among Students in the Past 30 Days

Substance	Never used		Not used in past month		Duration of use (days)											
					1–2		3–5		6–9		10–19		20–29		All 30	
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%	*n*	%
Alcohol	16,124	17.2	12,405	13.2	17,615	18.8	17,823	19.0	15,284	16.3	11,493	12.2	2,697	2.9	485	0.5
Cigarettes	61,094	64.9	16,446	17.5	5,131	5.4	2,148	2.3	1,449	1.5	1,872	2.0	1,996	2.1	4,043	4.3
Smokeless tobacco	83,568	89.6	6,614	7.1	1,091	1.2	463	0.5	334	0.4	373	0.4	324	0.3	468	0.5
Cigars	70,040	74.5	18,992	20.2	3,667	3.9	636	0.7	258	0.3	159	0.2	106	0.1	108	0.1
Marijuana	61,492	65.5	18,872	20.1	5,638	6.0	2,174	2.3	1,562	1.7	1,650	1.8	1,393	1.5	1,112	1.2
Amphetamines	87,277	92.8	4,519	4.8	703	0.7	424	0.5	298	0.3	318	0.3	228	0.2	263	0.3
Cocaine	88,243	93.9	4,253	4.5	882	0.9	316	0.3	145	0.2	89	0.1	33	0.0	51	0.1
Rohypnol, GHB, or liquid X (intentional use)	93,014	99.0	827	0.9	50	0.1	20	0.0	13	0.0	13	0.0	12	0.0	35	0.0
Ecstasy (MDMA)*	72,986	95.1	3,393	4.4	283	0.4	41	0.1	12	0.0	6	0.0	12	0.0	14	0.0

Note. Refers to question 9: "Within the last 30 days, on how many days did you use the following substances?" GHB = Gamma-Hydroxybutyric acid.
*Ecstasy use was only measured among respondents using the ACHA-NCHA Web (N = 43,231).

TABLE 16. Reported Consequences Students Experienced After Drinking Alcohol in the Past School Year

Consequence	Total		Female		Male	
	n	%	*n*	%	*n*	%
Did something you later regretted	26,391	35.7	15,583	34.2	9,927	37.8
Forgot where you were or what you did	22,074	29.8	12,584	27.7	8,719	33.2
Physically injured yourself	13,495	18.2	8,015	17.6	4,999	19.0
Had unprotected sex	10,232	13.9	5,689	12.5	4,123	15.7
Been involved in a fight	4,525	6.1	1,793	3.9	2,506	9.5
Physically injured another person	3,015	4.1	1,181	2.6	1,679	6.4
Had someone use force or threat of force to have sex with you	960	1.3	737	1.6	170	0.6

Note. Refers to question 18: "If you drink alcohol, within the last school year, have you experienced any of the following consequences of your drinking? (*Not applicable/Don't drink, No, Yes*)" Students reporting "Not applicable/Don't drink" were excluded from the analysis. Because of missing data by sex, the sum of the female and male responses do not always equal the total.

Mental and Physical Health

Four questions in the Spring 2006 ACHA-NCHA are related to students' mental and physical health. The following data are highlights from this section. The number of students who reported having been diagnosed with depression sometime in their lifetimes was 14.8% (n = 13,738). Of that percentage, 34.4% (n = 4,703) reported that they were diagnosed in the past school year, 26.4% (n = 3,598) reported that they are currently in therapy for depression, and 36.6% (n = 4,975) reported that they were currently taking medication for depression. During the past school year, 1.3% (n = 1,187) of students reported attempting suicide at least 1 time, and 9.3% (n = 8,700) of students reported seriously considering attempting suicide at least once. For further data on students' reports of mental health difficulties in the past school year, see Table 17.

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

- 17.8% (n = 16,399) reported using sunscreen daily;
- 6.6% (n = 6,165) reported getting enough sleep to wake feeling rested every day during the past week;
- 28.5% (n = 26,577) reported getting enough sleep to wake feeling rested on at least 5 of the past 7 days;
- 77.2% (n = 71,796) reported having had a dental examination and cleaning in the past year;
- 89.1% (n = 82,340) reported having their blood pressure checked within the past 2 years;
- 45.1% (n = 41,695) reported having their cholesterol checked in the past 5 years; and
- 0.4% (n = 324) reported having had hepatitis B or C within the past school year.

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

Limitations

Readers should consider several limitations in these data. 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 in the sample (111 of 117 participating institutions were ACHA institutional members) and may represent another source of bias. It is also possible that those 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, participating institutions were instructed 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, the campuses were given the option of using the ACHA-NCHA 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 ACHA-NCHA sample. In an effort 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.

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 or more times	
	n	%	*n*	%	*n*	%	*n*	%
Felt things were hopeless	35,189	37.8	35,870	38.5	10,185	10.9	11,935	12.8
Felt overwhelmed by all you had to do	6,094	6.5	29,636	31.8	23,174	24.9	34,291	36.8
Felt exhausted (not from physical activity)	7,914	8.5	29,621	31.8	22,123	23.8	33,491	36.0
Felt very sad	19,125	20.6	42,233	45.4	14,648	15.7	17,024	18.3
Felt so depressed it was difficult to function	52,341	56.2	25,572	27.5	6,439	6.9	8,728	9.4
Seriously considered attempting suicide	84,527	90.7	6,824	7.3	845	0.9	1,031	1.1
Attempted suicide	91,789	98.7	936	1.0	121	0.1	130	0.1

Note. Refers to question 40: "Within the last 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		Female		Male	
		n	%	*n*	%	*n*	%
Back pain	1	42,879	46.6	28,239	49.3	13,758	42.1
Allergy problems	2	42,122	45.5	27,440	47.8	13,758	41.8
Sinus infection	3	26,424	28.8	18,506	32.4	7,419	22.7
Depression	4	16,423	17.8	11,422	19.9	4,670	14.3
Strep throat	5	12,088	13.2	8,117	14.2	3,709	11.4
Anxiety disorder	6	11,418	12.4	8,507	14.8	2,674	8.2
Asthma	7	10,314	11.2	7,183	12.6	2,883	8.8
Ear infection	8	8,533	9.3	6,084	10.6	2,256	6.9
Seasonal Affective Disorder (SAD)	9	7,458	8.1	5,376	9.4	1,959	6.0
Bronchitis	10	7,123	7.8	5,173	9.0	1,819	5.6

Note. Refers to question 43: "Within the last school year, have you had any of the following? (*No, Yes*)" Rank order of reported health problems is based on total subjects. Because of missing data by sex, the sum of the female and male responses do not always equal the total.

Finally, several items on the ACHA-NCHA ask about a student's experience "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 be measuring 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 other surveys that ask for a 12-month recall.

COMMENT

Comprehensive data from the ACHA-NCHA Spring 2006 Reference Group expand our understanding of the health needs and capacities of college students. These data also challenge all professionals engaged in advancing the health of college students to use evidence-based approaches in planning college health initiatives. For further information, visit the ACHA-NCHA Web site (www.acha-ncha.org). Since March 2005, results from the ACHA-NCHA have been, and shall 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 a spring or fall sampling and analysis. A copy of the ACHA-NCHA scan form is available at www.acha-ncha.org.

NOTE

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ACKNOWLEDGMENTS

Thanks to the following members of the 2003–2004 ACHA-NCHA Advisory Committee for their contributions to this publication: Daisye Orr, MPH, CHES (co-chair); Patricia Ketcham, PhD, CHES (co-chair); Barbara Bloomer, RN, BSN; Eric Buhi, MPH, CHES; Frank Carnevale, MD; Patricia Fabiano, PhD; Dana Farley, MS; Amy Franklin, MSEd; Michael Haines, MS; Jenny Haubenreiser, MA; Patti Lubin, BSN; Sarah Mart, MS, MPH; Alejandro Martinez, PhD (board liaison to the ACHA-NCHA Advisory Committee); Mary Hoban, PhD, CHES (staff liaison to the ACHA-NCHA Advisory Committee); E. Victor Leino, PhD (ACHA Research Director).

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ERRATUM

There was an error in the March/April 2006 issue of *The Journal of American College Health*.

In Fennell R, "The Emperor Has No Clothes": emergency contraception should be available over-the-counter, 2006; 54(5):257–259. On page 259: The reference for the following quote was incorrect: "Emergency contraception has been available for more than 25 years and could prevent 1.7 million unintended pregnancies and 800,000 abortions each year in the US. It is a safe and effective method of contraception, and women who have used it report high levels of satisfaction." The correct reference should have been: Planned Parenthood Federation of America. Emergency contraception. Available at: http://www.plannedparenthood.org/pp2/portal/files/portal/medicalinfo/ec/fact-emergency-contraception.xml. Accessed January 8, 2006.

The Editor apologizes for the publication of this error.