

The American College Health Association National College Health Assessment (ACHA-NCHA), Spring 2003 Reference Group Report

The American College Health Association

Abstract. 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 instrument developed by the American College Health Association (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, access to health information, impediments to academic performance, and perceived norms across a variety of content areas, including injury prevention; personal safety and violence; alcohol, tobacco, and other drug use; sexual health; weight, nutrition, and exercise; and mental health. Twice a year, ACHA compiles aggregate data from institutions using the ACHA-NCHA to provide a reference group for data comparison. A portion of the data from the Spring 2003 Reference Group is provided in this article for use by professionals, researchers, institutions, departments, and organizations invested in advancing the health of college students.

Key Words: ACHA-NCHA, assessment, college health, 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 2001, Title IV institutions in the United States and its outlying areas enrolled 15.9 million students. Of those, 86.2% were enrolled in undergraduate programs, 11.9% were enrolled in graduate programs, and 1.9% were enrolled in first-professional programs.²

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 Today, ACHA's membership has grown from the original 20 institutions of higher education to more than 900. These member institutions represent the diversity of the higher education community—2- and 4-year, public and private, large and small. ACHA also serves more than 2,400 individual college healthcare professionals, including administrators and support staff, physicians, physician's assistants, nurses and nurse directors, health educators, mental health providers, pharmacists, and students dedicated to health promotion on their campuses. To address individual needs more effectively, the membership is divided into 11 regional affiliates and 9 discipline-specific sections.⁴ ACHA's research endeavors over the years have dealt with HIV-seroprevalence in university students,⁵ student health insurance,⁶ college health benchmarking,^{7,8} salaries and staffing,⁹ and, more recently, the ACHA-National College Health Assessment (ACHA-NCHA).¹⁰

In 1998, ACHA initiated a work group to develop the ACHA-National College Health Assessment, a survey instrument designed to collect information on a broad range of students' health behaviors, health indicators, and perceptions. Prior to this effort, consistent data on postsecondary students was lacking. The Centers for Disease Control and Prevention (CDC) has collected data on secondary school students since 1990 using the Youth Risk Behavior Surveillance System.¹¹ In 1995, Douglas and associates from the CDC published their results after surveying postsecondary students using the National College Health Risk Behavior Survey (NCHRBBS).¹² However, that study has not been repeated since then. The absence of a consistent comparable surveillance system that gathers data on postsecondary school students is filled by the ACHA-NCHA. Data collected from the ACHA-NCHA provide insight into our campus communities and have many

uses for staff, faculty, and students for determining health priorities, monitoring trends, allocating resources, and measuring the progress or success of health initiatives. In addition, some data are gathered to create a broader perspective on student life, as well as to illustrate the link between health and academic success.

The ACHA-NCHA has ties to 2 other important documents distributed by ACHA: the *Standards of Practice for Health Promotion in Higher Education* and *Healthy Campus 2010: Making It Happen*. 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.¹³ 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*¹⁴ is a set of national health objectives that colleges and universities use to set goals for improving students' health. In providing the necessary baseline data for many of the national objectives, the ACHA-NCHA supports *Healthy Campus 2010*.

METHOD

The ACHA-NCHA instrument was developed in 1998 by the ACHA-NCHA work group, using the CDC's National College Health Risk Behavior Survey (NCHRBS)¹² as a foundation for survey development. The work group also reviewed the Student Health Survey,¹⁵ the Core Alcohol and Drug Survey,¹⁶ the College Alcohol Study (CAS),¹⁷ Annual Student Health Behavior Assessment,¹⁸ the Monitoring the Future Study,¹⁹ and the National Health Objectives outlined in *Healthy People 2000*.²⁰ The work group then developed items that reflected the interdisciplinary nature of college health professionals.

The work group used data or published results from 3 external sources and ACHA-NCHA data collected in 3 pilot studies carried out in 1998, 1999, and spring 2000 to conduct reliability and validity analyses.²¹ The 3 external data sets are (1) The NCHRBS,¹² conducted in collaboration with representatives in academia, national health organizations, and federal agencies, a 1995 nationally representative sample of undergraduate college students aged 18 or older; (2) The CAS,²² a 1999 survey of students in 116 schools located in 39 states that was considered generalizable to college and university students nationally; and (3) The National College Women's Sexual Victimization Study (NCWSV)²³ a survey conducted between February and May 1997 of a nationally representative sample of 4,446 women who were attending 2- or 4-year colleges or universities during fall 1996.

The reliability analyses of the ACHA-NCHA findings showed consistent standardized alphas and average interitem correlation coefficients when compared with the NCHRBS.¹² The construct validity analyses showed similar correlation coefficients when compared with the NCWSV,²³ and measurement validity analyses showed similar odds ratios,

derived from a multiple variable logistic regression analysis, when compared with the CAS.²² Thirty-seven US postsecondary institutions self-selected to participate in the Spring 2003 ACHA-NCHA, and students on those campuses completed 20,724 surveys. This study and the formation of the ACHA-NCHA Spring 2003 Reference Group database included only those institutions that used random sampling techniques, which yielded a final data set consisting of 19,497 students on 33 campuses.

Among the demographic characteristics of the 33 campuses surveyed, 20 were public colleges or universities and 13 were private. The majority, 32 of 33, were 4-year institutions. Numbers of students enrolled in the participating schools varied widely: 5 had fewer than 2,500 students; 2 had 2,500–4,999 students; 9 had 5,000–9,999 students; 5 had 10,000–19,999, and 12 schools had 20,000 or more students. Equally varied were the geographic locations of the reporting institutions: 6 were in the Northeast, 12 in the Midwest, 5 in the South, and 10 were in the West. This wide variation in geographic locale provided a broad sampling of students in different US regions. There was also great variation in campus locations of participating institutions. Five schools were in urban areas with populations greater than 1,000,000, 13 were in urban settings with populations of between 100,000 and 1,000,000, 4 schools were in suburban settings, and 11 were in rural settings.

Sampling strategies included a mix of randomized classrooms, randomized mailings, or samples of all students (eg, all 1st-year students during orientation), and randomized Web-based surveying. The overall response proportion was 46%. Of the 33 schools covered, 14 used the ACHA-NCHA Web version and 19 used the ACHA-NCHA paper scan form version of the survey. A systematic evaluation was conducted to compare the ACHA-NCHA scan form with the Web-based ACHA-NCHA.²⁴ The evaluation indicated only slight differences in student demographics and differences on 4 perception items. Online respondents were slightly younger and more likely to live in campus housing than were scan-form respondents.

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 aggregated data set.

RESULTS

This report offers valuable information on a number of current and relevant health topics that affect 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 such health-related information. In addition, the ACHA-NCHA provides insight into issues that affect the college student population and are not often captured, although they may influence students' health status (eg, hours spent working as volunteers and credit card debt).

Demographic Characteristics

The ACHA-NCHA asks 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 but are not often identified as typical health issues. The following are findings from these questions:

Asked if they had any kind of health insurance (including prepaid plans such as HMOs), 85.6% ($n = 16,337$) of students responded *yes*.

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

- 17.2% ($n = 3,276$) worked 1–9 hours a week for pay;
- 21.0% ($n = 4,001$) worked 10–19 hours a week for pay;
- 24.0% ($n = 4,566$) worked 20 hours or more a week for pay;
- 32.4% ($n = 6,154$) volunteered 1–9 hours a week;
- 2.8% ($n = 535$) volunteered 10–19 hours a week;
- 1.3% ($n = 256$) 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:

- 68.6% ($n = 12,988$) carried no credit card debt in the past month, or paid the full amount;
- 21.8% ($n = 4,133$) carried \$1–\$1999 in credit card debt in the past month;
- 4.4% ($n = 841$) carried \$2000–\$3999 in credit card debt in the past month;
- 2.2% ($n = 410$) carried \$4000–\$5999 in credit card debt in the past month;
- 3.0% ($n = 562$) carried \$6000 or more in credit card debt in the past month.

See Table 1 for additional demographic characteristics. The data in Table 2 list the top 10 health impediments to academic performance students reported.

Health, Health Education, and Safety

In the ACHA-NCHA survey, 8 questions asked about topics identified as health, health education, and safety concerns. Students are 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: 92.5% ($n = 17,933$) said good, very good, or excellent; 6.4% ($n = 1,249$) said fair; 0.8% ($n = 150$) said poor. Data in Tables 3 and 4 provide findings related to health information received from students' college or university, students' sources of health-related information, and the believability of those sources.

When asked about seatbelt use in the past school year, 72.8% of students ($n = 14,060$) who rode in a car said they always wore a seatbelt. When asked about helmet use in the past school year, students' responses indicated that 13.9% of students ($n = 1,232$) who rode a bicycle said they always

TABLE 1. Demographic Characteristics of Participants ($N = 19,497$)

Characteristic	Total	<i>n</i> (%)
Sex		
Female	12,350	(67.3)
Male	5,989	(32.7)
Age (y)		
18–20	10,440	(55.1)
21–29	7,485	(39.5)
≥ 30	1,037	(5.5)
Year in school		
1st year undergraduate	5,272	(28.4)
2nd year undergraduate	3,934	(21.2)
3rd year undergraduate	3,561	(19.2)
4th year undergraduate	3,259	(17.6)
5th year or more	1,187	(6.4)
Graduate	1,225	(6.6)
Adult special/other	118	(0.6)
Full-time student status	18,248	(95.7)
Race or ethnicity (select all that apply)		
White, not Hispanic (includes Middle Eastern)	15,015	(77.0)
Black, not Hispanic	889	(4.6)
Hispanic or Latino	1,261	(6.5)
Asian or Pacific Islander	1,687	(8.7)
American Indian or Alaskan Native	183	(0.9)
Other	703	(3.6)
International student status	639	(3.4)
Membership in a social fraternity or sorority	1,977	(10.4)
Current relationship status		
Single	10,531	(55.2)
Married/domestic partner	1,341	(7.0)
Engaged/committed dating relationship	7,018	(36.8)
Separated	55	(0.3)
Divorced	121	(0.6)
Widowed	18	(0.1)
Sexual orientation or gender identity		
Heterosexual	18,041	(94.6)
Gay/lesbian	319	(1.7)
Bisexual	463	(2.4)
Transgender	12	(0.1)
Unsure	235	(1.2)
Living situation		
Campus residence hall	7,875	(41.2)
Fraternity or sorority house	473	(2.5)
Other university housing	593	(3.1)
Off-campus housing	7,259	(38.0)
Parent/guardian's home	2,130	(11.2)
Other	762	(4.0)

wore a helmet; 64.8% of students ($n = 1,868$) who rode a motorcycle said they always wore a helmet, and 6.9% of students ($n = 315$) who inline skated said they always wore a helmet.

When asked about physical fights and assaults, 6.7% of students ($n = 1,294$) reported being in a physical fight in the past school year; 3.7% of students ($n = 709$) reported being physically assaulted (sexual assault not included) in the past school year. Tables 5 and 6 provide information on the types

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

Rank	Health impediments	Total		Female		Male	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1.	Stress	6,034	32.0	4,294	35.4	1,519	25.9
2.	Cold/flu/sore throat	4,777	25.2	3,273	26.9	1,304	22.2
3.	Sleep difficulties	4,565	24.1	3,038	24.9	1,356	23.0
4.	Concern for troubled friend or family member	3,492	18.4	2,449	20.1	898	15.3
5.	Relationship difficulty	2,997	15.8	2,044	16.8	841	14.3
6.	Depression/anxiety disorder/SAD	2,755	14.6	1,996	16.4	656	11.2
7.	Internet use/computer games	2,303	12.2	1,163	9.6	1,053	17.9
8.	Sinus infection/ear infection/bronchitis/strep throat	1,694	9.0	1,275	10.5	357	6.1
9.	Death of a friend or family member	1,673	8.8	1,147	9.4	453	7.7
10.	Alcohol use	1,483	7.8	761	6.2	640	10.8

Note. Refers to Question 44: "Within the last school year, have any of the following affected your academic performance? (i.e. 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 respondents. SAD = seasonal affective disorder. Because of missing data by sex, the response categories do not always equal the total.

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

Rank	Source of information	Used		Rank	Believability of source	Believable	
		<i>n</i>	%			<i>n</i>	%
1.	Parents	13,975	74.9	1.	Health educators	16,765	88.9
2.	Friends	11,452	61.4	2.	Health center medical staff	16,788	88.8
3.	Internet/World Wide Web	10,983	59.0	3.	Parents	12,975	68.6
4.	Leaflets, pamphlets, flyers	11,019	58.7	4.	Leaflets, pamphlets, flyers	12,100	63.7
5.	Magazines	10,790	57.8	5.	Faculty/coursework	11,312	60.3
6.	Health center medical staff	10,222	54.7	6.	Campus newspaper articles	8,587	45.5
7.	Health educators	9,240	49.6	7.	Campus peer educators	7,775	41.6
8.	Television	9,170	49.1	8.	Resident assistants/advisors	5,942	31.8
9.	Faculty/coursework	6,250	33.6	9.	Religious center	5,516	29.4
10.	Campus newspaper articles	5,417	29.0	10.	Magazines	5,003	26.4
11.	Resident assistants/advisors	2,920	15.7	11.	Friends	4,504	23.8
12.	Campus peer educators	2,847	15.4	12.	Internet/World Wide Web	3,912	20.7
13.	Religious center	2,189	11.8	13.	Television	3,022	15.9

Note. Refers to Questions 3 and 4: "Do you usually get health-related information from any of the following sources?" (Yes, No); "Record the believability of each source of health information (Believable, Neither Believable nor Unbelievable, or Unbelievable)."

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 ACHA-NCHA survey, 5 questions are related to weight, nutrition, and exercise. The following data are findings from this section. Overall, 6.9% of students ($n = 1,312$) reported that they ate 5 or more servings of fruits and vegetables daily (the survey included definitions of serving sizes).

In terms of physical activity, 44.2% of students ($n = 8,485$) 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 51.5% of students ($n = 9,876$) 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 = weight [kg]/height [m]²) was 23.4 for women ($SD = 4.7$) and 24.7 for men ($SD = 4.4$). BMI was calculated based on the student's self-reported height and weight. Tables 7, 8, and 9

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

Information type	Total	
	<i>n</i>	%
1. Alcohol and other drug use prevention	9,737	49.9
2. Sexual assault/relationship violence prevention	8,865	45.5
3. Sexually transmitted disease prevention	7,704	39.5
4. Physical activity and fitness	6,734	34.5
5. AIDS or HIV infection prevention	6,132	31.5
6. Dietary behaviors and nutrition	6,009	30.8
7. Pregnancy prevention	5,428	27.8
8. Tobacco use prevention	5,051	25.9
9. Violence prevention	4,053	20.8
10. Injury prevention and safety	2,537	13.0
11. Suicide prevention	2,230	11.4
None of the above	4,609	23.6

Note. Refers to Question 2: "On which of the following health topics have you ever received information from your college or university?"

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

Sexual assault behavior	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Verbal threats for sex against your will	712	3.7	517	4.2	140	2.3
Sexual touching against your will	1,914	9.9	1,464	11.9	340	5.7
Attempted sexual penetration against your will	624	3.2	512	4.2	70	1.2
Sexual penetration against your will	339	1.8	269	2.2	49	0.8

Note. Refers to Question 7: "Within the last school year, have you experienced . . . ?" Because of missing data by sex, the response categories 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	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Emotional	2,588	13.4	1,852	15.1	594	10.0
Physical	394	2.0	265	2.2	99	1.7
Sexual	301	1.6	215	1.8	65	1.1

Note. Refers to Question 8: "Within the last school year, have you been in a relationship that was . . . ?" Because of missing data by sex, the response categories do not always equal the total.

TABLE 7. Estimated Body Mass Index (BMI) and Classifications Based on Students' Reported Height and Weight²⁵

Descriptor	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
< 18.5 Underweight	904	4.9	742	6.2	134	2.3
18.5–24.9 Healthy Weight	12,068	65.3	8,231	68.9	3,387	58.2
25–29.9 Overweight	3,864	20.9	2,035	17.0	1,668	28.7
30–34.9 Class I Obesity	1,140	6.2	604	5.0	475	8.2
35–39.9 Class II Obesity	334	1.8	209	1.7	115	2.0
≥ 40 Class III Obesity	176	1.0	125	1.0	42	0.7

Note. BMI = weight [kg]/height [m²]. Because of missing data by sex, the response categories do not always equal the total.

TABLE 8. Students' Reported Descriptions of Weight

Descriptor	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Very underweight	142	0.7	67	0.6	69	1.2
Slightly underweight	1,935	10.2	976	8.0	851	14.6
About the right weight	10,038	52.9	6,407	52.7	3,118	53.4
Slightly overweight	6,188	32.6	4,201	34.6	1,649	28.2
Very overweight	687	3.6	502	4.1	152	2.6

Note. Refers to Question 35: "How do you describe your weight?" Because of missing data by sex, the response categories do not always equal the total.

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

Behavior	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Exercise to lose weight	10,848	55.6	7,718	62.5	2,582	43.1
Diet to lose weight	6,572	33.7	5,000	40.5	1,247	20.8
Vomit or take laxatives to lose weight	492	2.5	443	3.6	26	0.4
Take diet pills to lose weight	1,123	5.8	873	7.1	188	3.1

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 response categories do not always equal the total.

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

- 26.2% of students (*n* = 5,018) reported ever being tested for HIV infection;
- 62.1% of women (*n* = 7,608) reported having a routine gynecological exam in the past year;
- 10.1% of sexually active women (*n* = 842) reported using emergency contraception within the past school year;
- 2.6% of female students (*n* = 215) who had vaginal intercourse within the past school year reported becoming pregnant unintentionally;
- 2.0% of male students (*n* = 80) who had vaginal inter-

course within the past school year reported getting someone pregnant unintentionally.

Although 74.7% of students ($n = 14,273$) reported having 0 to 1 sexual (oral, anal, or vaginal) partners in the past school year, 14.3% of students ($n = 2,612$) thought the typical student at their school had 0-1 sexual partners in the past school year. In addition, students reported the following sexual behaviors:

- In the past 30 days, 46.9% of students ($n = 8,551$) reported having had oral sex 1 or more times, although 96.0% ($n = 17,426$) thought the typical student had oral sex 1 or more times in the past 30 days;
- Also, 49.1% of students ($n = 8,953$) reported having vaginal intercourse 1 or more times in the past 30 days, yet 96.8% ($n = 17,577$) thought the typical student had vaginal sex 1 or more times in the past 30 days; and
- 4.1% of students ($n = 744$) reported having anal intercourse 1 or more times in the past 30 days, whereas 58.1% ($n = 10,503$) thought the typical student had anal sex 1 or more times in the past 30 days.

Data in Tables 10 through 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 ACHA-NCHA survey asked 11 questions about alcohol, tobacco, and other drug use. Responses indicated that although 61.8% of students ($n = 11,978$) reported they never used cigarettes, 7.4% of students ($n = 1,416$) thought the typical student never used cigarettes. Whereas 17.5% of students ($n = 3,388$) reported never using alcohol, 1.8% of students ($n = 340$) thought the typical student never used alcohol. In addition, 63.7% of students ($n = 12,308$) reported they never used marijuana; by contrast, only 15.5% of students ($n = 2,973$) thought the typical student never used marijuana.

From the reported number of drinks consumed the past time students partied or socialized, as well as the number of hours they partied or socialized, it is possible to calculate a mean estimated blood alcohol concentration (BAC) by

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

Contraceptive method	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Birth-control pills	7,697	39.5	5,001	40.5	2,288	38.2
Condoms (male or female)	6,886	35.3	4,160	33.7	2,344	39.1
Withdrawal	2,888	14.8	1,874	15.2	828	13.8
Spermicide	698	3.6	402	3.3	247	4.1
Fertility awareness	520	2.7	344	2.8	148	2.5
Depo Provera	494	2.5	329	2.7	131	2.2
Diaphragm/cervical cap/sponge	64	0.3	37	0.3	22	0.4
Norplant	23	0.1	11	0.1	9	0.2
Other method	597	3.1	407	3.3	148	2.5
Nothing	708	3.6	425	3.4	239	4.0

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 response categories do not always equal the total.

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

Type of sexual activity	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Oral intercourse	460	3.3	256	2.9	174	3.9
Vaginal intercourse	6,301	48.6	3,805	46.2	2,148	53.9
Anal intercourse	762	23.0	338	17.3	370	32.5

Note. Refers to Question 27: "If you are sexually active, did you use a condom the last time you had: oral, vaginal, or 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 response categories do not always equal the total.

using a formula from the US Department of Transportation, National Highway Traffic Safety Administration that used reported sex, weight, and number of drinks consumed over the number of hours of drinking.²⁶ The estimated BAC for female students was 0.079 ($SD = .091$) and the estimated BAC for male students was 0.079 ($SD = .091$). Students who do not drink and students who do not drive were excluded from the analysis, which found that 38.5% ($n = 5,385$) of the students reported that they drove after drinking any alcohol at all during the past 30 days. See Tables 13 through 16 for findings on students' alcohol and drug use, protective behaviors they engaged in when drinking alcohol, and the consequences students reported as a result of their drinking.

Mental and Physical Health

Four questions in the ACHA-NCHA are related to students' mental and physical health. The following data are highlights from this section. The number of students who reported being diagnosed with depression sometime in their lifetime was 13.4% ($n = 2,561$). Of that percentage, 39.1% ($n = 989$) reported being diagnosed in the past school year; 27.5% ($n = 698$) reported that they are currently in therapy for depression, and 40.4% ($n = 1,024$) reported that they were currently taking medication for

depression. During the past school year, 1.4% ($n = 270$) of students reported attempting suicide at least one time, and 10.3% ($n = 1,985$) 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:

- 16.0% ($n = 3,020$) reported using sunscreen daily;
- 6.8% ($n = 1,310$) reported getting enough sleep to wake feeling rested every day during the past week;
- 28.1% ($n = 5,399$) reported getting enough sleep to wake feeling rested on at least 5 of the past 7 days;
- 80.2% ($n = 15,380$) reported having had a dental exam and cleaning in the past year;
- 90.6% ($n = 17,157$) reported having their blood pressure checked within the past 2 years;
- 44.7% ($n = 8,451$) reported having their cholesterol checked in the past 5 years;
- 0.3% ($n = 60$) reported having hepatitis B or C within the past school year.

The top 10 health problems reported by students within the past school year are shown in Table 18.

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

Type of STI/STD	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Chlamydia	272	1.4	182	1.5	70	1.2
Genital Herpes	161	0.8	128	1.0	26	0.4
Gonorrhea	66	0.3	35	0.3	27	0.5
HIV	24	0.1	13	0.1	10	0.2
Human Papilloma Virus (HPV)	302	1.6	228	1.9	60	1.0
Pelvic Inflammatory Disease	114	0.6	82	0.7	25	0.4

Note. Refers to Question 43: "Within the last school year, have you had any of the following?" Because of missing data by sex, the response categories do not always equal the total.

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

Number of drinks	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
0	4,146	21.5	2,715	22.2	1,180	19.9
1-4	6,987	36.3	5,114	41.8	1,492	25.1
5-8	5,331	27.7	3,447	28.2	1,635	27.5
≥ 9	2,799	14.5	966	7.9	1,633	27.5

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 response categories do not always equal the total.

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

Behaviors	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Eat before and/or during drinking	11,655	75.9	7,445	76.6	3,590	74.8
Use a designated driver	11,467	77.1	7,702	81.7	3,190	69.1
Keep track of how many drinks you were having	9,753	63.8	6,684	69.2	2,606	54.4
Avoid drinking games	6,162	40.2	4,068	41.8	1,750	36.5
Determine, in advance, not to exceed a set number of drinks	5,172	33.7	3,614	37.3	1,295	27.0
Have a friend let you know when you've had enough	4,670	31.0	3,352	35.4	1,025	21.6
Choose not to drink alcohol	4,357	26.7	3,104	29.8	1,012	20.3
Pace your drinks to 1 or fewer per hour	4,021	26.4	2,979	30.9	811	16.9
Alternate nonalcoholic with alcoholic beverages	3,837	25.0	2,642	27.2	994	20.8
Drink an alcohol look-alike (nonalcoholic beer, punch, etc.)	946	6.1	711	7.2	175	3.6

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 response categories do not always equal the total.

Limitations

Readers should consider several limitations in these data. First, the cross-sectional data collection may reliably describe patterns of association but not causality. Second, although students were selected randomly, these data were drawn from a group of 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 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. In addition, campuses were given the option of using the ACHA-NCHA as a paper survey or as an online-based survey. 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. Self-report surveys are common in studies of this nature and are generally considered reliable. Finally, women are overrepresented and men are 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.

Conclusion

Comprehensive data from the ACHA-NCHA Spring 2003 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's Web site at www.acha.org. The ACHA-NCHA data will be published annually 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.

ACKNOWLEDGMENTS

Thanks to the following individuals for their contributions to this study: Nancy Allen, MA, CHES (ACHA President, 2004–2005), Reginald Fennell, PhD, CHES (ACHA President, 2003–2004); the following members of the 2003–2004 ACHA-NCHA Advisory Committee: 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, MEd; Michael Haines, MS; Jenny Haubenreiser, MA; Patti Lubin, BSN; Sarah Mart, MS, MPH; Alejandro Martinez, PhD (board liaison to the ACHA-NCHA Advisory Committee 2003–2004); Mary Hoban, PhD, CHES (staff liaison to the ACHA-NCHA Advisory Committee); E. Victor Leino, PhD (ACHA Research Director).

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

Substance	Days of use															
	Never used		Not used in last month		1-2		3-5		6-9		10-19		20-29		All 30	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Alcohol	3,388	17.5	2,663	13.8	3,642	18.8	3,466	17.9	3,006	15.6	2,494	12.9	570	2.9	102	0.5
Cigarettes	11,978	61.8	3,314	17.1	1,109	5.7	515	2.7	368	1.9	496	2.6	545	2.8	1,052	5.4
Smokeless tobacco	17,452	90.6	1,241	6.4	194	1.0	84	0.4	48	0.2	65	0.3	75	0.4	99	0.5
Cigars	14,743	76.3	3,657	18.9	706	3.7	112	0.6	49	0.3	31	0.2	17	0.1	19	0.1
Marijuana	12,308	63.7	3,820	19.8	1,197	6.2	539	2.8	395	2.0	430	2.2	383	2.0	261	1.4
Amphetamines	17,251	89.1	1,220	6.3	248	1.3	158	0.8	125	0.6	129	0.7	125	0.6	111	0.6
Cocaine	18,236	94.3	812	4.2	171	0.9	48	0.2	37	0.2	17	0.1	6	0	11	0.1
Rohypnol, GHB, or Liquid X (intentional use)	19,018	98.2	301	1.6	19	0.1	9	0	2	0	5	0	3	0	7	0

Note. Refers to Question 9: "Within the last 30 days, on how many days did you use the following substances?"

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

Consequences	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Did something you later regretted	5,922	38.5	3,570	36.6	2,011	41.7
Forgot where you were or what you did	4,836	31.4	2,828	29.0	1,750	36.3
Physically injured yourself	2,972	19.3	1,763	18.1	1,032	21.4
Had unprotected sex	2,436	15.8	1,372	14.1	920	19.1
Been involved in a fight	1,018	6.6	391	4.0	551	11.4
Physically injured another person	740	4.8	287	2.9	389	8.1
Had someone use force or threat of force to have sex with you	310	2.0	237	2.4	53	1.1

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?" Students reporting "Never used" and "Have used, but not in last 30 days" were excluded from the analysis. Because of missing data by sex, the response categories do not always equal the total.

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 things were hopeless	6,956	36.2	7,499	39.0	2,162	11.3	2,599	13.5
Felt overwhelmed by all you had to do	1,030	5.4	5,967	31.0	4,872	25.3	7,357	38.3
Felt exhausted (not from physical activity)	1,464	7.6	6,234	32.4	4,594	23.9	6,931	36.1
Felt very sad	3,460	18.0	8,925	46.5	3,048	15.9	3,770	19.6
Felt so depressed it was difficult to function	10,609	55.2	5,454	28.4	1,312	6.8	1,834	9.5
Seriously considered attempting suicide	17,251	89.7	1,565	8.1	205	1.1	215	1.1
Attempted suicide	18,946	98.6	214	1.1	25	0.1	31	0.2

Note. Refers to Question 40: "Within the last school year, how many times have you . . . ?"

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

Rank	Health problem	Total		Female		Male	
		<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
1.	Allergy	8,731	45.7	5,825	47.6	2,496	42.4
2.	Back pain	8,359	44.2	5,635	46.3	2,350	40.5
3.	Sinus infection	5,082	26.9	3,643	29.9	1,253	21.6
4.	Depression	3,566	18.8	2,519	20.7	874	15.0
5.	Strep throat	2,385	12.6	1,683	13.8	619	10.7
6.	Anxiety disorder	2,183	11.5	1,639	13.4	437	7.5
7.	Asthma	2,087	11.0	1,429	11.7	563	9.6
8.	Ear infection	1,687	8.9	1,260	10.4	360	6.2
9.	Repetitive stress injury	1,628	8.6	1,089	8.9	443	7.6
10.	Bronchitis	1,478	7.8	1,072	8.8	346	6.0

Note. Refers to Question 43: "Within the last school year, have you had any of the following?" Rank order of reported health problems is based on total respondents. Because of missing data by sex, the response categories do not always equal the total.

NOTE

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ABSTRACT

Singh, Delar K. **Students with Disabilities and Higher Education**. College Student Journal, 2003, 37 (September) pp. 367-378.

A total of 137 institutions of higher education returned a questionnaire that asked about structural accessibility, academic accessibility, dorm living, and recreational opportunities for students with orthopedic disabilities. Only 10 percent of the institutions offered structural accessibility, defined as entrance ramps, elevators, and automatic doors, in all campus buildings. About two-thirds of the institutions offered academic accessibility, defined as help with note-taking, extended time for the completion of assignments and tests, and flexibility in the time and place of test taking. Only 2 percent of the institutions offered wheelchair-accessible dorm rooms and other accessible residential facilities and services. Concerning recreational opportunities, nearly one-third of the institutions offered wheelchair sports and integrated social clubs. Only 7 percent of the institutions offered all four types of accessibility, and public institutions offered more accessibility than private institutions. (4 ref)—*Department of Education, Eastern Connecticut State University*.

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