

American College Health Association-National College Health Assessment (ACHA-NCHA) Spring 2004 Reference Group Data Report (Abridged)

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 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, the ACHA compiles aggregate data from participating institutions in a reference group report for data comparison. Results from the Spring 2004 Reference Group ($N = 47,202$) are presented in this article.

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 2002, Title IV institutions in the United States enrolled 16.6 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 2004 survey implementation, the ACHA-NCHA has been used to collect data from 165,288 college students at 274 institutions of higher education. Reliability and validity analyses of the ACHA-NCHA are described in a previously published article⁴ 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

Eighty US postsecondary institutions self-selected to participate in the Spring 2004 ACHA-NCHA. Students on those campuses completed 50,819 surveys. The ACHA-NCHA Spring 2004 Reference Group included data from only those

institutions that used random sampling techniques, which yielded a final data set consisting of 47,202 students on 74 campuses. The results for this reference group are presented in this article. (Results from the spring 2003 data collection period have been previously published).⁴

Of the 74 campuses included in the Spring 2004 Reference Group, 49 were public colleges or universities and 25 were private. The majority, 67 of 74, were 4-year institutions. Numbers of students enrolled in the participating schools varied: 9 had fewer than 2,500 students; 7 had 2,500–4,999 students; 17 had 5,000–9,999 students; 25 had 10,000–19,999; and 16 schools had 20,000 or more students. Equally varied were the geographic locations of the reporting institutions: 13 were in the Northeast, 18 were in the Midwest, 17 were in the South, and 24 were in the West. Two 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; 25 schools were in urban areas with populations between 100,000 and 1,000,000; 10 schools were in suburban areas; and 22 schools were in rural areas.

Sampling strategies included a mix of randomized classrooms, randomized mailings, samples of all students (eg, all first-year students during orientation), and randomized Web-based surveying. The overall response proportion was 35%. Of the 74 schools in this reference group, 45 used the ACHA-NCHA Web version ($n = 26,381$) and 29 used the ACHA-NCHA paper scan form version of the survey ($n = 20,821$). Researchers conducted a systematic evaluation to compare the ACHA-NCHA scan form with the Web-based ACHA-NCHA.⁹ The evaluation indicated only slight differences on 2 demographic and 4 perception variables. Online respondents were slightly younger, more likely to live in campus housing, and estimated other student's alcohol use as higher than those respondents who used the paper scanforms. Paper scanform respondents estimated other student's cigarette use, Rohypnol (flunitrazepam) use, and their number of sexual partners as higher than those respondents who used the online version of the survey.

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 working as volunteers, credit card debt).

Demographic Characteristics

The Spring 2004 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), 85.9% ($n = 37,801$) of students responded yes.

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

- 16.3% ($n = 7,475$) worked between 1 and 9 hours a week for pay;
- 20.2% ($n = 9,254$) worked between 10 and 19 hours a week for pay;
- 25.9% ($n = 11,848$) worked 20 hours or more a week for pay;
- 31.6% ($n = 14,425$) volunteered between 1 and 9 hours a week;
- 3.0% ($n = 1,376$) volunteered between 10 and 19 hours a week;
- 1.4% ($n = 618$) 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:

- 68.3% ($n = 31,035$) carried no credit card debt in the last month, or paid the full amount;
- 16.7% ($n = 7,575$) carried between \$1 and \$999 in credit card debt in the last month;
- 5.0% ($n = 2,254$) carried between \$1,000 and \$1,999 in credit card debt in the last month;
- 4.6% ($n = 2,072$) carried between \$2,000 and \$3,999 in credit card debt in the last month;
- 2.2% ($n = 985$) carried between \$4,000 and \$5,999 in credit card debt in the last month; and
- 3.4% ($n = 1,542$) carried \$6,000 or more in credit card debt in the last month.

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

Health, Health Education, and Safety

In the Spring 2004 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: 91.8% ($n = 43,028$) said good, very good, or excellent; 6.9% ($n = 3,257$) said fair;

TABLE 1. Demographic Characteristics of Participants (N = 47,202)

Characteristic	n	%
Sex		
Female	28,900	64.8
Male	15,715	35.2
Age		
18–20 years	22,523	49.4
21–29 years	19,538	42.8
≥ 30 years	3,553	7.8
Year in school		
1st year undergraduate	10,605	23.8
2nd year undergraduate	9,651	21.6
3rd year undergraduate	9,211	20.6
4th year undergraduate	7,460	16.7
5th year or more	2,453	5.5
Graduate	4,733	10.6
Adult special/other	537	1.2
Full-time student status	42,814	93.6
Race or ethnicity (select all that apply)		
White, not Hispanic (includes Middle Eastern)	34,482	73.1
Black, not Hispanic	3,051	6.5
Hispanic or Latino	2,453	5.2
Asian or Pacific Islander	5,393	11.4
American Indian or Alaskan Native	505	1.1
Other	1,880	4.0
International student status	2,154	4.7
Membership in a social fraternity or sorority	3,771	8.2
Current relationship status		
Single	24,845	54.2
Married/domestic partner	4,062	8.9
Engaged/committed dating relationship	16,405	35.8
Separated	157	0.3
Divorced	365	0.8
Widowed	41	0.1
Sexual orientation or gender identity		
Heterosexual	43,217	94.2
Gay/lesbian	877	1.9
Bisexual	1,112	2.4
Transgender	38	0.1
Unsure	639	1.4
Living situation		
Campus residence hall	16,256	35.4
Fraternity or sorority house	772	1.7
Other university housing	2,259	4.9
Off-campus housing	17,653	38.5
Parent/guardian's home	6,413	14.0
Other	2,537	5.5

and 1.0% (*n* = 482) 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, 74.6% of students (*n* = 34,784) 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 20.4% of students (*n* = 4,352) who rode a bicycle said they always wore a helmet; 69.5% of students (*n* = 4,832) who rode a motorcycle said they always wore a helmet, and 9.5% of students (*n* = 975) who used in-line skates said they always wore a helmet.

When asked about physical fights and assaults, 6.9% of students (*n* = 3,212) reported having been in a physical fight in the past school year, and 4.0% of students (*n* = 1,848) 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 2004 ACHA-NCHA survey, 5 questions examined weight, nutrition, and exercise. The following data are findings from this section. Overall, 7.3% of students (*n* = 3,334) 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, 42.2% of students (*n* = 19,573) 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 48.6% of students (*n* = 22,512) 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) was 23.5 kg/m² for women (*SD* = 4.9) and 24.7 kg/m² for men (*SD* = 4.5). Both of these BMI values fall within the "healthy weight" range as defined by the National Institutes of Health.¹⁰ 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 2004 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:

- 28.1% of students (*n* = 12,993) reported having ever been tested for HIV infection;
- 61.8% of women (*n* = 17,687) reported having had a routine gynecological examination in the past year;
- 11.1% of sexually active women (*n* = 2,226) reported having used emergency contraception within the past school year;
- 2.5% of female students (*n* = 496) who had had vaginal intercourse within the past school year reported having become pregnant unintentionally; and
- 2.3% of male students (*n* = 248) who had had vaginal intercourse within the past school year reported having gotten someone pregnant unintentionally.

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

Rank	Health impediments	Total		Female		Male	
		n	%	n	%	n	%
1	Stress	14,734	32.4	10,225	35.9	4,058	26.4
2	Cold/flu/sore throat	11,676	25.6	7,911	27.8	3,429	22.2
3	Sleep difficulties	11,190	24.6	7,254	25.4	3,608	23.4
4	Concern for troubled friend or family member	8,243	18.1	5,710	20.0	2,274	14.8
5	Relationship difficulty	7,243	15.9	4,809	16.9	2,206	14.3
6	Depression/anxiety disorder/SAD	6,975	15.3	4,899	17.2	1,858	12.0
7	Internet use/computer games	6,097	13.4	2,843	10.0	3,092	20.1
8	Death of a friend or family member	3,899	8.6	2,706	9.5	1,030	6.7
9	Sinus infection/ear infection/bronchitis/strep throat	3,886	8.5	2,890	10.2	884	5.8
10	Alcohol use	3,484	7.6	1,823	6.4	1,509	9.8

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.

Although 75.0% of students ($n = 34,448$) reported having had 0 or 1 sexual (oral, anal, or vaginal) partners in the past school year, 17.2% of students ($n = 7,569$) thought the typical student at their school had had 0 or 1 sexual partners in the last school year. In addition, students reported the following sexual behaviors:

- In the past 30 days, 46.6% of students ($n = 20,521$) reported having had oral sex 1 or more times, although 94.2% of respondents ($n = 41,092$) thought the typical student had had oral sex 1 or more times in the past 30 days;
- 49.6% of students ($n = 21,805$) reported having had vaginal intercourse 1 or more times in the past 30 days, but 95.0% of respondents ($n = 41,398$) thought the typical student had had vaginal sex 1 or more times in the past 30 days; and

- 4.8% of students ($n = 2,088$) reported having had anal intercourse 1 or more times in the past 30 days, whereas 58.1% of respondents ($n = 25,232$) 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 incidence of sexually transmitted infection, disease, or complications.

Alcohol, Tobacco, and Other Drug Use

The Spring 2004 ACHA-NCHA survey asked 11 questions about alcohol, tobacco, and other drug use. Responses indicated that although 62.5% of students ($n = 29,224$) reported they never used cigarettes, only 10.7% of students ($n = 4,978$) thought the typical student never used cigarettes.

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

Rank	Source of information	Used		Rank	Source of information	Believable	
		n	%			n	%
1	Parents	32,881	72.8	1	Health center medical staff	40,978	89.6
2	Internet/World Wide Web	29,485	65.3	2	Health educators	40,722	89.3
3	Friends	27,515	61.0	3	Parents	30,416	66.5
4	Health center medical staff	25,604	56.6	4	Faculty/coursework	28,522	62.8
5	Magazines	25,245	55.9	5	Leaflets, pamphlets, flyers	28,408	61.9
6	Leaflets, pamphlets, flyers	24,987	55.0	6	Campus newspaper articles	20,809	45.6
7	Health educators	22,187	49.1	7	Campus peer educators	19,840	43.8
8	Television	21,573	47.7	8	Resident assistants/advisors	15,314	33.9
9	Faculty/coursework	15,710	34.9	9	Religious center	12,701	28.0
10	Campus newspaper articles	13,025	28.8	10	Friends	11,516	25.1
11	Campus peer educators	7,404	16.5	11	Magazines	11,386	24.9
12	Resident assistants/advisors	6,716	15.0	12	Internet/World Wide Web	10,267	22.5
13	Religious center	5,006	11.1	13	Television	6,939	15.1

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	
	<i>n</i>	%
1. Alcohol and other drug use prevention	21,182	44.9
2. Sexual assault/relationship violence prevention	20,127	42.7
3. Sexually transmitted disease prevention	16,881	35.8
4. Physical activity and fitness	14,654	31.1
5. Dietary behaviors and nutrition	13,682	29.0
6. AIDS or HIV infection prevention	13,467	28.5
7. Pregnancy prevention	10,826	22.9
8. Tobacco use prevention	10,669	22.6
9. Violence prevention	9,589	20.3
10. Suicide prevention	6,673	14.1
11. Injury prevention and safety	6,077	12.9
None of the above	12,833	27.8

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)."

In addition, 17.9% of students (*n* = 8,358) reported never using alcohol, yet 2.6% of students (*n* = 1,207) thought the typical student never used alcohol. Likewise, 64.3% of students (*n* = 30,013) reported they never used marijuana, although 18.0% of students (*n* = 8,326) thought the typical student never used marijuana.

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.¹¹ Furthermore, all 50 states and the District of Columbia have laws indicating that driving with a BAC of 0.08% or higher is illegal.¹² 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.¹³ The estimated BAC for female students was 0.074% (*SD* = 0.086) and the estimated BAC for male students was 0.070% (*SD* = 0.084). Excluding students who do not drink and students who do not drive from the analysis, 36.9% (*n* = 11,960) 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.

Mental and Physical Health

Four questions in the Spring 2004 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 14.9% (*n* = 6,884). Of that percentage, 35.8% (*n* = 2,436) reported having been diagnosed in the past school year; 25.2% (*n* = 1,715) reported that they are currently in therapy for depression, and 38.0% (*n* = 2,590) reported that they were currently taking medication for depression. During the past school year, 1.4% (*n* = 629) of students reported attempting suicide at least 1 time, and 10.1% (*n* = 4,680) of students reported seriously considering attempting suicide at least once. For further data on students' reports of mental health difficulties in the last 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:

- 16.1% (*n* = 7,358) reported using sunscreen daily;
- 6.9% (*n* = 3,182) reported getting enough sleep to wake feeling rested every day during the past week;

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

Sexual assault behavior	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Verbal threats for sex against your will	1,687	3.6	1,227	4.3	361	2.3
Sexual touching against your will	4,306	9.2	3,415	11.9	674	4.3
Attempted sexual penetration against your will	1,333	2.8	1,117	3.9	151	1.0
Sexual penetration against your will	712	1.5	543	1.9	123	0.8

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 Last School Year

Type of abusive relationship	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Emotionally abusive	6,083	13.0	4,309	15.0	1,440	9.2
Physically abusive	963	2.1	683	2.4	198	1.3
Sexually abusive	701	1.5	488	1.7	154	1.0

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.

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

BMI category	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
< 18.5 Underweight	2,113	4.8	1,663	5.9	404	2.6
18.5–24.9 Healthy Weight	28,536	64.2	19,005	68.0	8,828	57.7
25–29.9 Overweight	9,625	21.7	4,893	17.5	4,438	29.0
30–34.9 Class I Obesity	2,717	6.1	1,471	5.3	1,150	7.5
35–39.9 Class II Obesity	932	2.1	560	2.0	338	2.2
≥ 40 Class III Obesity	534	1.2	377	1.3	132	0.9

Note. BMI = weight [in kg]/height squared [in m²]. 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

Responses	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Very underweight	351	0.8	116	0.4	213	1.4
Slightly underweight	4,694	10.2	2,192	7.7	2,270	14.8
About the right weight	23,977	52.2	14,804	52.0	8,076	52.5
Slightly overweight	15,034	32.7	10,019	35.2	4,355	28.3
Very overweight	1,916	4.2	1,346	4.7	463	3.0

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.

- 27.7% (*n* = 12,811) reported getting enough sleep to wake feeling rested on at least 5 of the past 7 days;
- 77.7% (*n* = 35,967) reported having had a dental examination and cleaning in the past year;
- 89.0% (*n* = 40,705) reported having their blood pressure checked within the past 2 years;
- 43.6% (*n* = 19,926) reported having their cholesterol checked in the past 5 years; and
- 0.4% (*n* = 202) reported having had 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.

DISCUSSION

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

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

Behavior	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Exercise to lose weight	25,269	53.5	17,651	61.1	6,475	41.2
Diet to lose weight	15,591	33.0	11,741	40.6	3,176	20.2
Vomit or take laxatives to lose weight	1,159	2.5	1,029	3.6	82	0.5
Take diet pills to lose weight	2,144	4.5	1,688	5.8	347	2.2

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.

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	17,884	37.9	11,451	39.6	5,585	35.5
Condoms (male or female)	16,704	35.4	9,953	34.4	5,991	38.1
Withdrawal	6,743	14.3	4,324	15.0	2,091	13.3
Spermicide	1,452	3.1	796	2.8	603	3.8
Depo provera	1,222	2.6	806	2.8	349	2.2
Fertility awareness	1,188	2.5	751	2.6	390	2.5
Diaphragm/cervical cap/ sponge	180	0.4	102	0.4	67	0.4
Norplant	73	0.2	31	0.1	35	0.2
Other method	1,869	4.0	1,345	4.7	417	2.7
Nothing	2,033	4.3	1,172	4.1	723	4.6

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

Type of sexual activity	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Oral intercourse	1,148	3.5	617	3.0	448	4.0
Vaginal intercourse	15,429	48.9	9,148	46.5	5,579	54.1
Anal intercourse	2,151	24.1	998	19.3	1,051	32.0

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.

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

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

Type of STI/STD	Total		Female		Male	
	n	%	n	%	n	%
Human papilloma virus (HPV)	845	1.9	649	2.3	152	1.0
Chlamydia	545	1.2	396	1.4	120	0.8
Genital herpes	492	1.1	359	1.3	112	0.7
Pelvic inflammatory disease	252	0.6	198	0.7	45	0.3
Gonorrhea	144	0.3	72	0.3	62	0.4
HIV	123	0.3	59	0.2	54	0.4

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.

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

Number of drinks	Total		Female		Male	
	n	%	n	%	n	%
0	10,185	22.0	6,256	21.9	3,402	21.9
1-4	17,772	38.3	12,621	44.3	4,358	28.1
5-8	12,023	25.9	7,535	26.4	3,917	25.2
9 or more	6,374	13.8	2,097	7.4	3,858	24.8

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 in Which Students Reported Always or Usually Engaging When Drinking in the Last School Year

Behaviors	Total		Female		Male	
	n	%	n	%	n	%
Eat before or during drinking	28,184	76.7	17,645	77.8	9,233	75.2
Use a designated driver	26,445	76.4	17,346	80.8	7,901	69.0
Keep track of how many drinks you were having	23,821	65.2	15,820	70.2	6,957	56.9
Avoid drinking games	15,722	42.9	10,198	45.1	4,778	39.0
Determine, in advance, not to exceed a set number of drinks	12,598	34.4	8,576	37.9	3,404	27.8
Have a friend let you know when you've had enough	10,192	28.3	7,198	32.5	2,456	20.3
Pace your drinks to 1 or fewer per hour	10,246	28.1	7,472	33.3	2,300	18.8
Alternate non-alcoholic with alcoholic beverages	10,037	27.4	6,825	30.1	2,725	22.3
Choose not to drink alcohol	10,215	26.3	6,971	28.9	2,756	21.5
Drink an alcohol look-alike (non-alcoholic beer, punch, etc.)	2,392	6.4	1,737	7.5	523	4.2

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 Last 30 Days

Substance	Never used		Not used in last month		Days of use											
	n	%	n	%	1-2 days		3-5 days		6-9 days		10-19 days		20-29 days		All 30 days	
					n	%	n	%	n	%	n	%	n	%	n	%
Alcohol	8,358	17.9	6,322	13.6	8,463	18.1	8,416	18.0	7,398	15.9	5,933	12.7	1,495	3.2	263	0.6
Cigarettes	29,224	62.5	7,532	16.1	2,654	5.7	1,128	2.4	799	1.7	1,218	2.6	1,256	2.7	2,956	6.3
Smokeless tobacco	42,159	90.9	2,814	6.1	451	1.0	225	0.5	145	0.3	173	0.4	163	0.4	245	0.5
Cigars	35,523	76.1	8,595	18.4	1,880	4.0	349	0.7	142	0.3	83	0.2	59	0.1	79	0.2
Marijuana	30,013	64.3	9,401	20.2	2,680	5.7	1,223	2.6	903	1.9	908	1.9	882	1.9	641	1.4
Amphetamines	42,296	90.5	2,814	6.0	486	1.0	313	0.7	239	0.5	245	0.5	167	0.4	174	0.4
Cocaine	43,793	93.8	2,115	4.5	445	1.0	171	0.4	83	0.2	40	0.1	12	0.0	30	0.1
Rohypnol, GHB, or Liquid X (intentional use)	46,047	98.5	585	1.3	37	0.1	12	0.0	11	0.0	4	0.0	7	0.0	24	0.1
Ecstasy (MDMA)†	24,687	94.2	1,395	5.3	97	0.4	16	0.1	2	0.0	4	0.0	1	0.0	7	0.0

Note. Refers to question 9: "Within the last 30 days, on how many days did you use the following substances?"
 †Ecstasy use was only measured among respondents using the ACHA-NCHA Web (N = 26,381).

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

Consequences	Total		Female		Male	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Did something you later regretted	13,918	37.8	8,287	36.4	4,896	39.9
Forgot where you were or what you did	11,273	30.6	6,527	28.7	4,152	33.8
Physically injured yourself	6,908	18.7	4,073	17.9	2,468	20.1
Had unprotected sex	5,751	15.6	3,219	14.2	2,172	17.7
Been involved in a fight	2,480	6.7	957	4.2	1,326	10.8
Physically injured another person	1,729	4.7	633	2.8	960	7.8
Had someone use force or threat of force to have sex with you	615	1.7	460	2.0	107	0.9

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.

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

Mental health difficulty	0 times		1-4 times		5-8 times		9 or more times	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Felt things were hopeless	17,107	36.9	17,877	38.6	5,206	11.2	6,177	13.3
Felt overwhelmed by all you had to do	2,845	6.1	14,509	31.3	11,382	24.5	17,654	38.1
Felt exhausted (not from physical activity)	3,807	8.2	14,628	31.6	10,920	23.6	17,000	36.7
Felt very sad	8,867	19.1	20,735	44.8	7,620	16.5	9,082	19.6
Felt so depressed it was difficult to function	25,415	54.9	12,973	28.0	3,388	7.3	4,536	9.8
Seriously considered attempting suicide	41,727	89.9	3,689	7.9	421	0.9	570	1.2
Attempted suicide	45,687	98.6	520	1.1	38	0.1	71	0.2

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

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 as a paper survey or as an online-based 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. 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 2004 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

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

Rank	Health problem	Total		Female		Male	
		n	%	n	%	n	%
1.	Allergy problems	21,299	46.3	13,885	48.6	6,593	42.8
2.	Back pain	20,989	46.1	13,824	48.7	6,434	42.3
3.	Sinus infection	12,841	28.2	8,926	31.4	3,484	22.9
4.	Depression	8,650	18.9	5,983	21.0	2,296	15.0
5.	Strep throat	5,866	12.9	3,935	13.9	1,718	11.3
6.	Anxiety disorder	5,490	12.0	4,048	14.2	1,203	7.9
7.	Asthma	5,045	11.0	3,442	12.1	1,398	9.1
8.	Ear infection	4,492	9.9	3,172	11.2	1,147	7.5
9.	Bronchitis	3,574	7.9	2,579	9.1	854	5.6
10.	Seasonal Affective Disorder (SAD)	3,490	7.7	2,508	8.8	875	5.8

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.

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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