Alcohol, marijuana, and other drug use among children and adolescents is a major public concern. Recent research on middle and senior high school students showed a reversal of previous declines in smoking marijuana and using drugs other than marijuana, a decline in students' personal disapproval of marijuana, and a high prevalence of alcohol use (Johnston, O'Malley, and Bachman 1996; U.S. Department of Health and Human Services 1996). Concern over this trend surfaced in the popular press, resulting in calls for measures to prevent teen drug use (Christian Science Monitor 1996; Friend 1996; Johnson 1996).

The use of alcohol, marijuana, and other drugs has long been linked with several negative outcomes for youth, including poor academic achievement and school dropout (Jessor and Jessor 1977; Kolbe et al. 1986; Dryfoos 1990; Mensch and Kandel 1981). Peer approval of the use of alcohol and other drugs and the availability and use of these substances by other students at school are prominent influences on students to use drugs (Dusek and Girdano 1987; Gelfand, Jenson, and Drew 1982; Gottfredson 1988).

In this Brief, student reports of peer approval, availability, and use at school of alcohol, marijuana, and other drugs are examined in connection with school and student characteristics including participation in school alcohol/drug education programs. Although student reports reflect perceptions rather than objective measures of substance availability, use, and peer approval, they provide valuable information about the perceived presence of substances at school and the norms of fellow students. These findings based on the school environment lend confirmation to the other recent findings about drugs and adolescents. They also point to the potential value of the message perceived by students in school alcohol/drug education as a preventative measure. The data in this Brief are from the 1993 National Household Education Survey conducted by Westat for the National Center for Education Statistics (NCES). Data were collected in telephone interviews with 6,504 students in grades 6 through 12.

Availability of Alcohol, Marijuana, and Other Drugs at School

The availability of alcohol, marijuana, and other drugs at school is a major contributing factor to the school learning environment and to students' opportunities to use these substances. Students were asked how difficult it would
be for them to get alcohol, marijuana, or other drugs at school if they wanted to obtain these substances. Their responses indicated whether drugs were very easy, fairly easy, hard, or nearly impossible to obtain. Table 1 shows the percentages reporting that various substances were very easy or fairly easy to obtain at school. About 30 percent of U.S. students in grades 6 through 12 reported that alcohol and marijuana were easily available at school, while fewer students, about 20 percent, reported that other drugs were easily available at school.

**Differences in Student Reports of Alcohol, Marijuana, and Other Drug Availability at School by School and Student Characteristics**

Student reports of the availability at school of alcohol, marijuana, and other drugs increased between middle school/junior high school and high school. Students in the 6th through 8th grades were less likely than students in grades 9 and 10 or 11 and 12 to report that alcohol, marijuana, and other drugs were available at school. Reports of easy availability from students in the upper grades were two to three times those of students in the 6th through 8th grades (table 1 and figure 1). For example, less than 20 percent of the 6th through 8th graders reported easy availability of alcohol or drugs at school, while about 40 percent of the students in the upper grades reported easy access to alcohol and marijuana and 30 percent reported easy access to other drugs.

Students in public schools were twice as likely to report easy access to marijuana and other drugs when compared to their contemporaries in private schools; these differences occurred regardless of whether the public school was one to which the student was assigned or one that had been chosen by the family (table 1). For instance, about 15 percent of students in private schools reported easy availability of marijuana compared to 30 percent of students in assigned public schools and 34 percent in public schools of choice. Although the differences between private school students and public school students’ reports are not quite as striking, they also occur when access to alcohol is considered.

School size also was a factor in student reports of easy availability of alcohol, marijuana, and other drugs. Students attending larger schools were more likely to report easy availability than students in smaller schools (table 1). The most striking difference in reports of easy availability was for marijuana. Fifteen percent of students at schools with fewer than 300 students said this substance was easily available at school versus 24 percent of students at schools enrolling 300 to 599 students, 29 percent at schools with 600 to 999 students, and 40 percent at schools of 1,000 or more.

Figure 1.—Percent of students who reported very easy or fairly easy availability of substances at school, by student's grade level: 1993

![Figure 1](image_url)

Peer Approval of Alcohol, Marijuana, or Other Drug Use

The availability of alcohol, marijuana, and other drugs at school is likely linked to the acceptance of those substances by the students at the school. In order to assess peer approval, students were asked whether their friends at school thought it was all right to drink alcoholic beverages like beer, wine coolers, or liquor, to smoke marijuana, or to use drugs other than marijuana. Percentages of students who answered "yes" to these questions are shown in table 1.

Peer approval varied by type of substance, with more students saying their friends approved of alcohol than marijuana and more reporting approval of both substances than of other drugs. Forty-four percent of U.S. students in grades 6 through 12 said that their friends at school accept drinking alcohol, about one in five students (20 percent) indicated peer acceptance of marijuana, and approximately one in seven students (14 percent) reported peer acceptance of drugs other than alcohol and marijuana (table 1).

Differences in Student Reports of Peer Approval by School and Student Characteristics

As students advance through middle school and high school, they are more likely to report peer approval of alcohol, marijuana, and other drugs. Reports of peer approval of alcohol use in the 9th and 10th grades were over twice those in the 6th through 8th grades for alcohol (57 percent versus 21 percent). While overall peer approval was lower for marijuana and for other drugs than for alcohol, the relative differences in approval level between grades 6 through 8 versus grades 9 and 10 are greater. In addition, the reported peer approval level of 11th and 12th grade students was over three times greater than that of 6th through 8th grade students for alcohol, about five times greater for marijuana, and about four times greater for other drugs (table 1). Smaller differences, but differences nevertheless, were evident between 9th and 10th graders and 11th and 12th graders in reports of peer approval of alcohol and marijuana use.

The percentage of students who reported peer approval of substance use also varied by the type of school the students attended. Students attending private schools were less likely than their contemporaries in assigned or chosen public schools to report peer approval of marijuana use. Similarly, private school students reported less peer approval of the use of other drugs when compared to students in assigned public schools. Apparent differences in peer approval of alcohol were not significant (table 1).

Students in the largest schools (1,000 or more students) reported the highest levels of peer approval of alcohol, marijuana, and other drugs. In these large schools, about 50 percent of the students said their friends at school approved of alcohol use, approximately 30 percent reported peer approval of marijuana use, and about 20 percent said that their friends approve of the use of other drugs (table 1).

Alcohol and Drug Use at School

Exposure to the use of alcohol or drugs other than alcohol at school could affect both the learning environment and students' opportunities to use drugs and also may be related to students' approval of alcohol and other drug use. Students were asked whether or not they had seen any students drunk or showing the effects of alcohol or any students high on other drugs at school this year. In this instance, "other drugs" includes marijuana. Youths were not expected to be able to discriminate among the effects of different drugs that other students might have taken. Approximately one-third of students (33 percent) reported seeing other students at their schools showing the effects of alcohol, while about one-quarter (27 percent) reported that other students were at school while high on drugs other than alcohol. It should be noted that use of alcohol or other drugs by a small minority may be observed by many other students. Results are presented in table 1.
Differences in Student Reports of Alcohol and Drug Use at School by School and Student Characteristics

Students in the 6th through 8th grades were least likely to report seeing other students under the influence of alcohol (16 percent) or drugs other than alcohol (11 percent). In comparison, reports by students in the 9th and 10th grades were approximately three times greater than those by students in the 6th through 8th grades for alcohol (46 percent) and for other drugs (38 percent), and reports of students in the 11th and 12th grades were about three times those of 6th through 8th grade students for alcohol (51 percent) and about four times those of 6th through 8th grade students for other drugs (44 percent). Eleventh and 12th graders were also more likely than 9th and 10th graders to report seeing students under the influence of alcohol (table 1).

Differences between private and public schools are also evident in students' reports of substance use at school. Students attending private schools were about half as likely to say that they had witnessed other students under the influence of alcohol or drugs other than alcohol than were students in assigned public schools or chosen public schools. For instance, 17 percent of private school students versus 35 percent in assigned public schools and 33 percent in public schools of choice said they have seen students under the influence of alcohol at their schools (table 1).

In general, the percentages of students who reported seeing other students under the influence of alcohol or drugs at school increased with school size, with the reported incidence nearly twice as high in schools with enrollments of 1,000 or more in comparison with schools with fewer than 300 students (alcohol, 43 percent versus 23 percent, and other drugs, 37 percent versus 16 percent).

School Alcohol/Drug Education

Schools are aware of the many influences on students to use alcohol and other drugs, and alcohol/drug education curricula have been developed to teach students about the dangers of substance use and to help them develop strategies to resist using alcohol and other drugs. In the NHES:93, in addition to asking about peer approval of alcohol and other drugs and their availability and use at school, students were asked if they had received any alcohol/drug education during the current school year. Approximately 80 percent of the students reported that they participated in some type of alcohol/drug education in the current school year. However, despite efforts by schools to provide alcohol/drug education, about 30 percent of the students participating in these programs reported easy access to alcohol or marijuana at school, and about 20 percent reported easy access to other drugs. Reported easy access to alcohol, marijuana, and other drugs is not appreciably different among students who reported no alcohol/drug education in the current school year.

The Main Message About Alcohol in School Alcohol/Drug Education Programs

The absence of a clear and important impact by education programs on alcohol and drugs at school may be due to many factors. (See Silvia and Thorne 1997 for similar findings and a discussion of some of those factors.) Students who did not report receipt of alcohol/drug education in the current school year may have
participated in such an educational program in recent past years. There may be differences in the ways schools present alcohol/drug education, and the length and intensity of programs may have differing effects on students. Another important difference may be the main message that students perceive in their education programs.

In an effort to better understand the possible impact of educational efforts, all students, regardless of whether they reported receiving alcohol/drug education in the current school year, were asked to identify the main message about alcohol they remember from school alcohol/drug education programs. In a telephone survey, the measure of the main message perceived from an educational program is, of necessity, a simple one and cannot capture important aspects of the message such as the context in which it is conveyed (e.g., a physiological context). The Safe and Drug-Free Schools and Communities Act mandates a “wrong and harmful” message in alcohol/drug prevention programs, but schools may include more than one message, and students may hear most or all of them. Also, it should be noted that the measure is of students’ perceptions of the main message. This study does not capture schools’ practices with regard to the main message they are trying to convey.

Because drugs other than alcohol are illegal, it was presumed that a strict “no use” message for these substances would be imparted by educators and heard clearly by students. However, alcohol use, while illegal for minors, is not illegal for adults, and the messages about alcohol perceived by students may vary. Twenty-six percent of 6th through 12 grade students chose the message “do not drink” as the main message they heard in school alcohol/drug education programs, while 62 percent reported the main message was "do not drink and drive," and 12 percent said they received another main message, including “do not drink until you are legally old enough,” “do not drink too much,” or an unspecified message (figure 2).

Figure 2.—Percent of students who reported various main messages in school alcohol/drug education programs: 1993

![Figure 2: Percent of students who reported various main messages in school alcohol/drug education programs: 1993](image)

When the main message remembered from alcohol/drug education is considered, some potentially interesting relationships with availability and use of alcohol and other drugs at school emerge. Students who reported receiving the main message "do not drink" were less likely to report easy availability of alcohol, marijuana, or other drugs than those who reported the "do not drink and drive" (table 1). Also, a smaller percentage of students who said they received the "do not drink" message reported seeing students under the influence of alcohol or of drugs other than alcohol than did other students.

Because students choose friends who likely hold opinions similar to theirs, the relationship between the message received in school alcohol/drug education and peer approval of substances is particularly interesting. The students who recalled a “do not drink” main message were less likely than those reporting a "do not drink and drive" message to say their friends at school approved of alcohol, marijuana, or other drugs and less likely than those reporting some other message to say their friends approve of alcohol or marijuana (figure 3).

**Summary**

In this Brief, items from the NHES:93 School Safety and Discipline interview were used to examine the reports of 6th through 12th grade students about the availability and use of alcohol, marijuana, and other drugs at school, as well as peer approval of substance use. Results varied by type of substance; students were more likely to report peer approval of alcohol than of marijuana or of other drugs. Close to one-third of students reported easy availability of alcohol and marijuana at school, and about one-third reported seeing students at school under the influence of alcohol. The availability of drugs other than alcohol and their reported use at school were less common.

**Figure 3.— Percent of students who reported peer approval of alcohol use, by main message about alcohol perceived in school alcohol/drug education programs: 1993**

<table>
<thead>
<tr>
<th>Message</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Do not drink&quot;</td>
<td>31%</td>
</tr>
<tr>
<td>&quot;Do not drink &amp; drive&quot;</td>
<td>49%</td>
</tr>
<tr>
<td>Other message</td>
<td>44%</td>
</tr>
</tbody>
</table>

Students in lower grade levels (6-8), in private schools, and in schools with fewer than 1,000 students were less likely to report peer approval of substance use and easy availability at school than students in higher grade levels (9-10 and 11-12), in public schools, and in schools with 1,000 or more students. Although fewer students in private schools reported easy availability of alcohol or seeing students under the influence of alcohol at school than students in public schools, relatively high percentages of students in private and public schools alike reported peer approval of alcohol use.

The wide acceptance of alcohol in our society is reflected in the peer approval of alcohol use by 44 percent of 6th through 12th grade students. However, the relationship between students perceiving a "do not drink" message in alcohol/drug education programs and lower peer approval of alcohol use, as well as of marijuana or other drug use, that emerges in these data suggests the utility of further research to explore the implications of this finding. Schools that emphasize an explicit "no use" message in their alcohol and drug education programs may be quite different from schools that do not, and further research is needed to explore this issue also. Finally, differences in the perceived main message and its effects may lie with students themselves. For instance, whether or not they already use alcohol may affect the message they hear. This is another area of potentially fruitful research.

In sum, results from the NHES:93 highlight the problems of substance availability, peer approval of substances, and seeing alcohol and drug use at school and are suggestive in terms of improvement. In particular, this study suggests the potential importance of including a "do not drink" message about alcohol in alcohol/drug education programs and transmitting that message clearly to students.

Survey Methodology and Data Reliability

The 1993 National Household Education Survey is a telephone survey conducted by the U.S. Department of Education, National Center for Education Statistics. Data collection took place from January through April of 1993. The sample was selected using random-digit-dialing (RDD) methods and is nationally representative of all civilian, noninstitutionalized persons in the 50 states and the District of Columbia. Data were collected using computer-assisted telephone interviewing (CATI) technology.

The School Safety and Discipline (SS&D) component of the NHES:93, which is the basis of this report, included a sample of students in grades 3 through 12. Two instruments were used to collect data on the school experiences of these students. A screening interview (Screener), administered to an adult member of the household, was used to determine whether any youth of the appropriate ages lived in the household, to collect information on each household member, and to identify the appropriate parent/guardian respondent. If one or two eligible youth resided in the household, interviews were conducted about each youth. If more than two eligible youth resided in the household, two youth were randomly sampled as interview subjects. For households with youth who were sampled for the survey, SS&D interviews were conducted with the parent/guardian most knowledgeable about the care and education of each youth. If an eligible youth resided in a household in which no adult was acting in a caretaking capacity for him or her, then that "emancipated" youth responded to the interview. A sample of youth in grades 6 through 12 was also interviewed following the completion of the parent interview about the youth. This report was based on the responses of students in grades 6 through 12.
Response Rates

For the NHES:93 survey, Screeners were completed with 63,844 households, of which 12,829 contained at least one child sampled for the SS&D component. The response rate for the Screener was 82 percent. The completion rate for the SS&D interview with parents of 6th through 12th grade students, or the percentage of interviews conducted with parents for sampled youth in that grade range, was 90 percent, and the completion rate for the youth in 6th through 12th grade who were sampled was 83 percent. Thus, the overall response rate for the SS&D interview with parents of students in grades 6 through 12 was 74 percent (the product of the Screener response rate and the SS&D completion rate). For youth, the overall response rate was 68 percent. For the NHES:93, item nonresponse (the failure to complete some items in an otherwise completed interview) was very low. The item nonresponse rates for variables in this report are generally less than 2 percent. Through a procedure known as “hot-deck” imputation (Kalton and Kasprzyk 1986), responses were imputed for missing values (i.e., “don’t know,” “refused,” or “not ascertained”). As a result, no missing values remain.

Data Reliability

Estimates produced using data from the NHES:93 are subject to two types of error, sampling and nonsampling errors. Nonsampling errors are errors made in the collection and processing of data. Sampling errors occur because the data are collected from a sample rather than a census of the population.

Nonsampling Errors

Nonsampling error is the term used to describe variations in the estimates that may be caused by population coverage limitations and data collection, processing, and reporting procedures. The sources of nonsampling errors are typically problems like unit and item nonresponse, the differences in respondents' interpretations of the meaning of the questions, response differences related to the particular time the survey was conducted, and mistakes in data preparation.

In general, it is difficult to identify and estimate either the amount of nonsampling error or the bias caused by this error. In the NHES survey, efforts were made to prevent such errors from occurring and to compensate for them where possible. For instance, during the survey design phase, focus groups and cognitive laboratory interviews were conducted for the purpose of assessing respondent knowledge of the topics, comprehension of questions and terms, and the sensitivity of items. The design phase also entailed over 500 staff hours of CATI instrument testing and a pretest in which over 275 interviews were conducted.

An important nonsampling error for a telephone survey is the failure to include persons who do not live in households with telephones. About 92 percent of all students in grades 3 through 12 live in households with telephones. Estimation procedures were used to help reduce the bias in the estimates associated with youth who do not live in households with telephones.

Sampling Errors

The sample of households with telephones selected for the NHES:93 is just one of many possible samples that could have been selected. Therefore, estimates produced from the NHES:93 sample may differ from estimates that would have been produced from other samples. This type of variability is called sampling error because it arises from using a sample of household with telephones, rather than all households with telephones.

The standard error is a measure of the variability due to sampling when estimating a statistic; standard errors for estimates presented in this report were computed using a replication method known as “jackknife” replication (Wolter 1985). Standard errors can be used as a measure of the precision expected from a particular sample. The probability that a complete census count would differ from the sample estimate by less than 1 standard error is about 68 percent. The chance that the difference would be less than 1.65 standard errors is about 90 percent; and that the difference would be less than 1.96 standard errors, about 95 percent.
Standard errors for all of the estimates are presented in the table. These standard errors can be used to produce confidence intervals. For example, an estimated 43.8 percent of students reported peer approval of drinking alcohol (rounded to 44 percent for this report). This figure has an estimated standard error of 0.8. Therefore, the estimated 95 percent confidence interval for this statistic is approximately 42.2 to 45.4 percent.

The tests of significance used in this analysis are based on Student's t statistics. As the number of comparisons at the same significance level increases, it becomes more likely that at least one of the estimated differences will be significant merely by chance, that is, it will be erroneously identified as different from zero. Even when there is no statistical difference between the means or percentages being compared, there is a 5 percent chance of getting a significant t value of 1.96 from sampling error alone. As the number of comparisons increases, the chance of making this type of error also increases.

A Bonferroni adjustment was used to correct significance tests for multiple comparisons. This method adjusts the significance level for the total number of comparisons made with a particular classification variable. All the differences cited in this report are significant at the .05 level of significance after a Bonferroni adjustment.

Acknowledgments

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Endnotes

1. Students' answers to questions about beer or wine and about liquor were combined into a new variable describing the availability of alcohol. If either beer or wine and/or liquor were reported to be very easy or fairly easy to obtain at school, alcohol was coded as easily available. Otherwise, it was coded as not easily available.


References


Table 1.—Percent of students who reported easy availability, peer approval of use, and evidence of use of substances at school, by student and school characteristics: 1993

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Number of students in grades 6 through 12 (thousands)</th>
<th>Easy availability at school of</th>
<th>Peer approval of use of</th>
<th>Seeing students under the influence of</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td>Alcohol ²</td>
<td>Marijuana</td>
<td>Other drugs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Percent s.e.</td>
<td>Percent s.e.</td>
<td>Percent s.e.</td>
</tr>
<tr>
<td>Total</td>
<td>24,060</td>
<td>31 0.6</td>
<td>29 0.7</td>
<td>22 0.9</td>
</tr>
<tr>
<td>Student grade level</td>
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<td>6 - 8</td>
<td>11,017</td>
<td>16 1.1</td>
<td>12 1.1</td>
<td>12 0.9</td>
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<td>9 - 10</td>
<td>6,832</td>
<td>42 1.6</td>
<td>43 1.6</td>
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<td>Alcohol/drug education in the current school year ²</td>
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<td></td>
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<td>Yes</td>
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<td>28 0.8</td>
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</tr>
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<td>24 1.9</td>
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<tr>
<td>Main message about alcohol in school programs ³</td>
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<td></td>
</tr>
<tr>
<td>Do not drink</td>
<td>6,297</td>
<td>21 1.2</td>
<td>18 1.6</td>
<td>15 1.4</td>
</tr>
<tr>
<td>Do not drink and drive</td>
<td>14,839</td>
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<td>34 0.9</td>
<td>24 1.0</td>
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<td>31 2.1</td>
<td>29 1.9</td>
<td>24 1.8</td>
</tr>
</tbody>
</table>

1Easy availability" means that youth reported the substance is very easy or fairly easy to obtain at school.
2Alcohol refers to beer, wine, and/or liquor.
3From September until survey. Data were collected from January through April.
4Asked of all students; not limited to current alcohol/drug education programs. Included in the "other message" category were the other two messages offered, "do not drink until you are legally old enough" and "do not drink too much," and other messages.

NOTE: s.e. is standard error. Numbers may not add to total due to rounding.