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# Changing Drug Use Patterns Among Adolescents in Western Nebraska

by

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## ABSTRACT

**A**lcohol and other drug use practices and attitudes among students in grades 7, 9 and 12 in two western counties were surveyed in 1987 and again in 1990. Alcohol specific data from these surveys were used to assess differences in practices and attitudes that could have resulted from the schools' increased alcohol and other drug education efforts. Practice/attitude differences in the predicted directions were noted for students. No change was noted for students' perceptions of community acceptance of alcohol and other drugs.

## BACKGROUND

The scope of school-based alcohol and other drug education programs has increased significantly in the past five years. In 1990-91 alone \$2 million federal dollars were provided to Nebraska schools to support alcohol and other drug education programs.<sup>1</sup> While schools are expected to evaluate their programs, few have made their evaluation results available.

In 1987 teachers in all public schools in the Educational Service Unit #13 area (Scottsbluff and Banner Counties) conducted a survey of alcohol and other drug use patterns among all students in Grades 4, 6, 7, 9 and 12. In 1990, ESU #13 schools repeated the survey. This paper compares the 1987 and 1990 survey results for Grades 7, 9 and 12 only and suggests the effects of the alcohol and other drug education programs in

these schools.

This paper also illustrates one approach to using survey results to evaluate possible program effects without the benefit of a control group or the use of complex statistical analyses. This approach, carefully carried out in populations large enough to generate stable data, can provide administrators with a picture of trends in response to educational initiatives. While schools are likely to

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recognize the benefit of locally generated data for their own program and curriculum planning, it is important to consider the relevance of such data to groups outside the school building. Survey data may be useful in presentations to a school board, city council, or parent-teacher group by an administrator seeking program support or community involvement in the educational process.

In the ESU #13 survey, it was not possible to withhold alcohol and drug education from a sample of classes to create a control group, so a series of theoretically based expectations were established at the beginning of the program against which to compare results. These expectations were based on principles of learning and information diffusion and adoption.<sup>2</sup>

Alcohol is the most commonly used drug by adolescents and the drug most likely to cause problems. It is also the principal gateway drug. While the schools in this study developed alcohol and other drug education programs, and while the surveys asked about other drugs besides alcohol, only alcohol measures are reported here to assess program effectiveness. Alcohol's relatively common use generates stable survey data that are more useful for evaluating program effectiveness than the less frequently used drugs. The less frequent use of other drugs and the stronger social sanctions surrounding their use make survey data about their use subject to a wider margin of error.

The six critical expectations established for this program were:

1. Students will recognize the school's increased alcohol (and other drug) education efforts.
2. The first observed changes in drug use patterns will occur in the most commonly used drug: alcohol.
3. Drug education efforts will result in increases in the proportion of students perceiving alcohol (and other drug) use to be dangerous.
4. Behavior changes resulting from these educational programs will be first detected among younger students.
5. Effective alcohol (and other drug) education will result in an increased proportion of students acknowledging personal problems associated with drug use, in this case alcohol use.
6. Effective school programs will

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be related to changes in the community's values.

The two indicators of community values were students' perceptions of 1) the availability of alcohol and 2) the role parents play as a source of information about alcohol (and other drugs).

### METHODS

The survey instrument used in this study was a modified form of the University of Michigan/NIDA/Annual Survey of Drug Use Among High School Seniors in the United States.<sup>3,4</sup> This was the same instrument used by the Nebraska Prevention Center for Alcohol and Drug Abuse to survey student alcohol and other drug use patterns statewide in 1988.<sup>5</sup> Classroom teachers gathered the data following a standard protocol.

The six theoretically based expectations guided the analysis of the differences between the 1987 and the 1991 survey data.

### RESULTS

1. Students will recognize the school's increased alcohol and other drug education efforts.

Students were asked where they learned the most about alcohol and other drugs. Data from 1987 and 1990 clearly reflect an increase in the proportion of students who recognized the school as their principal source of information (Table 1). More students recognized the school's efforts in 1990 compared to 1987: 11% more. For there to be an increase in the percentage of students acknowledging the school as their principal source of learning about alcohol and other drugs, there had to be a decline in the percentage of students naming other sources. The largest reduction was in the percentage of students who named television and movies as their source of learning about alcohol and other drugs.

2. The first changes in drug use patterns will occur among the most commonly used drug: alcohol.

Alcohol is the drug of choice and

	Males		Females	
	1987 %	1990 %	1987 %	1990 %
School	27.6	39.9	33.4	45.0
Friends	24.2	22.0	23.5	22.2
TV/Movies	22.1	14.6	17.6	11.2
Parents	16.9	12.5	14.5	13.3
Church	1.3	1.7	1.5	0.5
Other	7.8	9.3	9.4	7.8
N =	688	591	633	600

	Males		Females	
	1987 %	1990 %	1987 %	1990 %
Age 11-14 "very dangerous"	45.3	50.6	43.7	52.1
Age 15+ "very dangerous"	24.7	38.5	28.3	38.4
N =	688	591	633	600

the drug causing the most problems for adolescents. Alcohol use patterns are relatively stable and, therefore, are easier to interpret than use patterns of other common drugs like tobacco and marijuana. Since these other drugs are used by only a small percentage of the students (less than a quarter) changes in use are harder to detect reliably.

The ESU #13 results suggest that the proportion of students who had used alcohol in the last year had declined from 60.6% to 56.3% for males and from 52.4% to 50.4% for females. The second most frequently used drug — marijuana — showed no decline in the number of male users in the last year (12.2% in 1987; 12.4% in 1990). Among females only a small decline was noted (10.1% in 1987; 8.5% in 1990). Tobacco use data

were not available for both surveys.

3. Effective alcohol and other drug education will result in increases in the proportion of students perceiving alcohol and other drug use as dangerous.

Alcohol use was seen as "very dangerous" by a minority of students, however, the proportion acknowledging alcohol as "very dangerous" increased between 1987 and 1990 for both males and females in both age groups (Table 2).

4. Behavior changes resulting from effective educational programs will be detected first among younger students.

Data in Table 3 suggest that for alcohol the predicted changes occurred among all groups of students for 12-month alcohol use. The changes for

**Table 3****Alcohol Use Patterns**

	Last 30 days		Last 12 months	
	1987 %	1990 %	1987 %	1990 %
<b>Sex</b>				
Male	32.4	30.8	60.6	54.3
Female	26.4	24.4	52.4	50.9
<b>Age</b>				
11-12	11.7	8.6	24.2	21.6
13-14	26.1	18.7	52.2	46.5
15-16	26.2	32.8	64.9	61.5
17+	49.1	50.4	82.8	79.3
<b>N =</b>	1321	1191	1321	1191

**Table 4****Alcohol-Related Problems Among Students Who Use Alcohol**

	Males		Females	
	1987 %	1990 %	1987 %	1990 %
Caused you to behave in ways you later regretted	45.3	50.6	43.7	52.1
Involved you with people you think are a bad influence on you	18.2	23.2	21.2	31.4
Hurt relationship with boyfriend/ girlfriend	14.2	18.8	13.1	20.4
Hurt your relationship with parents	10.4	13.3	9.4	19.9
Hurt performance in school	9.1	13.8	9.4	13.3
Caused physical health to be bad	9.1	12.5	6.9	13.8
Got into trouble with the police	10.0	15.6	6.0	10.0
<b>N =</b>	688	591	633	600

the less stable 30-day use were evident among students 14 years or younger only.

**5. Effective alcohol and other drug education will result in an increased proportion of students acknowledging personal problems associated with drug use.**

Denial of the consequences of alcohol and other drug use is often suggested as a major obstacle to effective prevention. Increased acknowledgement of the consequences of alcohol and other drug use is a desirable outcome of alcohol and other

drug education. Results for alcohol showed that in 1990, compared to 1987, on all the scales reported there was a larger proportion of students who acknowledged negative consequences from their use. The differences, 1987-1990, tended to be greater for females (Table 4).

**6. School programs reflect community values. Effective school program changes will be related to changes in the community's values. The two indicators of community values were students' perceptions of**  
1) the availability of alcohol and

2) the role parents play as a source of information about alcohol and other drugs.

The effectiveness of school-based educational programs often is limited because the community and parent support fails to reinforce the principles taught in school. Students' perceptions of the availability of alcohol in the community was used as an assessment, albeit indirect, of changes in the community that would support the school's initiative.

**“The effectiveness of school-based educational programs often is limited because community and parent support fails to reinforce the principles taught in school.”**

Table 5 suggests that only among females aged 11-14 was there a downturn in the proportion perceiving alcohol as easy to obtain. Older females and males were more likely to report that alcohol was easier to obtain in 1990 than in 1987.

The second measure of community change in support of the school's educational efforts was student's perceptions of parents as a source of information about alcohol and other drugs. There was no increase between 1987 and 1990 (Table 1). There was no evidence from either of these two measures that community changes were occurring to support the school's initiatives.

**IMPLICATIONS**

This paper describes unique results. Few if any of the school districts or educational service units in Nebraska have chosen to measure the effectiveness of their alcohol and other drug education programs by assessing students' practices and perceptions at two points in time. All too often, schools conduct surveys in populations too small to yield stable results or without concern for possible follow up activities. When this happens,

**Table 5****Proportion Perceiving Alcohol as "Fairly Easy" or "Very Easy" to Obtain**

	Males		Females	
	1987 %	1990 %	1987 %	1990 %
Age 11-14 Alcohol	60.3	65.2	72.4	68.9
Age 15+ Alcohol	88.0	89.7	90.2	92.2
N =	668	591	633	600

valuable information is lost that could have been gained from careful evaluation efforts. ESU #13's combination of data from many schools provides a regional picture of educational effectiveness measured over three years.

**“Despite the apparent effectiveness of the school's efforts there is unfortunately no evidence with the two measures studied that the community has changed in ways that would support the school's efforts.”**

This report describes only alcohol-related measures. We suggest that these may be used as a marker of the success for broad based alcohol and other drug educational efforts. The consistency and appropriateness of the changes reported here is encouraging. All the changes in student measures occurred in the direction predicted. These results, like most small-scale school surveys, were not subjected to probability analysis. In the real world of school administration, statistical significance is often of less importance than clear, observable and consistent changes over time.

These results suggest that changes, albeit small, have occurred in these two counties between 1987 and 1990. It would be reasonable to attribute

these changes to the school's increased efforts, clearly recognized by the students (Table 1). Despite the apparent effectiveness of the school's efforts there is unfortunately no evidence with the two measures studied that the community has changed in ways that would support the school's efforts.

Considering the positive results of these school-based educational activities, the area of Nebraska served by ESU #13 may explore expansion of its programming to build parent and community support for the schools' drug education efforts. □

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