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DRUG AND ALCOHOL PREVENTION PROJECT FOR SIXTH GRADERS: FIRST-YEAR FINDINGS

Karole J. Kreutter, Herbert Gewirtz, Joan E. Davenny
and Carol Love

ABSTRACT

Data gathered in this study are the first-year results of a three-year program evaluation for a drug and alcohol prevention project. One hundred fifty-two 6th graders made up the target group which received instruction using Botvin's life skills training curriculum. Sixty-four additional subjects made up a control group which received no treatment. Both groups were pre- and posttested on the following variables: knowledge about and attitudes toward substances, self-concept, passivity, and locus of control. Results indicated that the program had a significant positive impact on the target subjects' passivity, knowledge about drugs and alcohol, and self-image.

In the mid-1960s, as public concern about adolescent drug use became serious, many communities initiated prevention programs with the focus on increasing information about and establishing appropriate attitudes toward substance abuse. While these programs may have achieved these goals, the literature indicates that they were minimally effective in changing actual drug use behavior (Schaps, DiBartolo, Moskowitz, Palley, & Churgin, 1981; Second Report of the National Commission on Marijuana and Drug Abuse, 1973; Cabinet Committee on Drug Abuse Prevention, 1977). In fact, Swisher, Crawford, Goldstein, and Yura (1971) found a negative relationship between knowledge and actual usage, suggesting that programs which are solely informational can lead to more liberal attitudes and a corresponding tendency toward abuse. Not only were the positive results of these programs limited, but Dembo (1979) suggested that most utilized inadequate evaluation procedures.

The next generation of programs was oriented toward a more social-psychological model, and was thought to be more promising (Schaps

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et al., 1981; Battjes, 1985). This model assumes, in part, that substance use occurs within a context of social pressures, and therefore suggests an approach that familiarizes students with the major social influences on their behavior and teaches them strategies for resisting these pressures. Battjes (1985) described an effective education program designed to promote self-esteem, successful interpersonal relationships, and adequate decision-making skills. However, in order for such prevention programs to be successful, the influence of peers has to be taken into account since it is the best single predictor of substance abuse (Ensminger, Brown, & Kellam, 1984; Newcomb & Bentler, 1985; Kandel, Kessler, & Margulies, 1978; Hansen, Malotte, Collins, & Fielding, 1987; Marcos, Baker, & Johnson, 1986; Budd, Eiser, Morgan, & Gamage, 1985; McKinnon & Johnson, 1986; Thorne & DeBlassie, 1985; Jessor, 1975; Hamburg, Kraemer, & Jahnke, 1975). Teenagers are the most vulnerable to involvement with drugs, beginning as early as age 13 or 14 (Segal, 1986) when, developmentally, parents are gradually replaced by peers as the predominant source of influence. This suggests that when there is more bonding to peers, as opposed to family and school, there is increased vulnerability to substance use. In looking for ways to combat this peer factor, researchers (Jurich & Polson, 1984; Dignan, Steckler, Block, Howard, & Cosby, 1985; Dignan, Block, Steckler, & Cosby, 1986; Steffenhagen, 1980; Kaplan, 1980) focused on such variables as locus of control and self-esteem, believing that they are related to resistance to peer influence.

The newer models employ multicomponent approaches designed to establish social-psychological deterrents via skills building and the fostering of personal competence (Schinke, Gilchrist, Snow, & Schilling, 1985). One such approach was developed by Botvin and Eng (1982) (see also Botvin, Baker, Renick, Filazzola & Botvin, 1984; Botvin, Eng, & Williams, 1980). Using their life skills training approach with 8th, 9th, and 10th graders, they found that the program reduced cigarette smoking and increased resistance to smoking. Their studies also examined the effect of the curriculum on personality variables, such as social anxiety, locus of control, self-image, influenceability, and need for acceptance. The results varied as a function of grade, though knowledge increased for all grades. The program had a similar effect on the smoking behavior of 7th graders (Botvin & Eng, 1982), and results suggested that there was increased knowledge about smoking and advertising as well as a reduction in social anxiety and influenceability. Applying this curriculum to substance abuse, Botvin et al. (1984) found that it had a positive impact on drinking and marijuana use in 7th graders; they also obtained positive results for attitudes and knowledge.

The present research employed Botvin's (1981) life skills training curriculum with 6th graders as a means of studying its effect on knowledge and attitudes toward substance abuse, self-concept, assertiveness, and locus of control. Sixth graders were selected because there is considerable data to suggest that 13 and 14 are peak ages for beginning involvement with substance use (Segal, 1986).

METHOD

Subjects

A total of 216 6th-grade parochial school students participated. One hundred fifty-two subjects from the Meriden-Wallingford, Connecticut, area made up the target group, and 64 subjects from parochial schools in Waterbury, Plainville, and New Haven, Connecticut, made up the control population. The control subjects were selected from areas thought to be roughly equivalent in demographics to those of the target group.

Materials

Botvin's (1981) life skills training curriculum was presented to each class in the target group during 18 training sessions. All subjects in the study were administered the following measures as pretests and posttests: the Piers-Harris Children's Self-Concept Scale (Piers, 1977); a knowledge survey developed by the authors (based on Botvin's curriculum); the Nowicki-Strickland Personal Reaction Survey (locus of control-children) (Nowicki & Strickland, 1973); an informal drug and alcohol attitude scale developed by the authors; and the Children's Assertive Behavior Scale (Michelson & Wood, 1982).

Procedure

All subjects in the study were given the pretest measures. The target subjects then participated in the curriculum presentation while the controls received no treatment. All of the training sessions were conducted by a single trainer, and at the end of the curriculum, all subjects were administered the posttests. Mean scores for self-concept, knowledge, passivity, and locus of control were calculated and compared using *t* tests. Gain scores for these variables were computed and compared using *t* tests as well. No comparisons were completed on the attitude scale due to the fact that all of the subjects in the study scored exceptionally high on the pretest. A simple yes-or-no format was utilized in the development of the scale, which did not offer a broader range of responses as would a Likert-type scale.

RESULTS

To see if the curriculum impacted on the target subjects, comparisons were made between the pre- and posttest scores on the measures of self-concept, knowledge, assertiveness (scored for passivity), and locus of control. Similarly, pre- and posttest results for control subjects were compared (see Table 1).

The significant difference between the pre- and posttest self-concept scores for the target group suggests that the curriculum had a significant positive impact on the self-esteem variable. Similarly, the significant decrease in the number of incorrect items on the knowledge survey for the target subjects indicates that the program increased their knowledge about drugs and alcohol. On the assertiveness measure, there was a significant decrease in passivity for target subjects. There was no change for target subjects on the locus of control scale. No changes were noted on any of the variables for the control subjects.

Gain scores were computed for both the target and control groups on these same measures so that the groups could be compared on the basis of the amount of change that had taken place from pretest to posttest (see Table 2). There were significant differences between the target and control subjects for self-concept, knowledge, and passivity. The difference between the two groups on the locus of control variable was not significant. These findings are consistent with those cited in Table 1.

TABLE 1
Comparison of Pretest and Posttest Means for Target
and Control Subjects

Variable	Target Subjects		Control Subjects	
	Pretest	Posttest	Pretest	Posttest
Self-Concept	55.69	61.09*	58.78	60.86
Knowledge (# of errors)	16.71	13.07**	16.27	16.31
Passivity	6.20	4.91***	5.95	6.36
Locus of Control	14.74	14.33	15.03	14.78

* $t=8.44$; $p<.001$

** $t=11.14$; $p<.001$

*** $t=3.83$; $p<.001$

TABLE 2

Comparison of Gain Scores for Target and Control Subjects

Variable	Target Subjects	Control Subjects	t Score
Self-Concept	5.41	2.08	2.67 (p<.008)
Knowledge	3.64	.05	6.39 (p<.001)
Passivity	1.38	-.41	-2.98 (p<.003)
Locus of Control	.41	.25	.23 (N.S.)

DISCUSSION

The results of this study suggest that the current program had a significant positive impact on 6th graders' passivity, knowledge about drugs and alcohol, and self-concept. This is consistent with Botvin et al.'s (1984) findings.

A single trainer presented the curriculum to all target subjects so that there would be consistency in the presentations. This individual was not part of the educational system nor was she familiar to the students. The ultimate plan in the project involves training regular classroom teachers to present the curriculum and run booster sessions. It will be important to monitor the results as the instructor changes from an unfamiliar presenter to a more familiar classroom figure.

The present study is part of a three-year intensive program evaluation. In addition to initial training for target groups, booster sessions will be held at specified time intervals, and the progress of youngsters on variables examined in this study will continue to be monitored. An alternative scale for measuring attitudes toward drugs and alcohol will be employed so that this variable can be measured more accurately. Additionally, a parent-involvement component will be added to the project to see if results improve by increasing parental knowledge and support.

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