

PERCEPTIONS OF DRUG ABUSE RESISTANCE EDUCATION (DARE):
A REVIEW OF SELECT EVALUATIONS

by

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ABSTRACT

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The purpose of this study was to review select research studies attempting to evaluate and measure perceptions of the Drug Abuse Resistance Education (DARE) program or similar school-based prevention strategies. The study focused on variables which students, teachers and administrators value in their perceptions of the programs.

As the review of literature suggested, the research has been extensive, indicating that DARE produces some relevant short-term reduction in attitudes about and use of drugs and alcohol. However, long-term effectiveness, into the critical

high school years, appears negligible. In light of this research, it is surprising that DARE continues receive positive ratings by educators and to continue to garner political and community support.

The results of the study indicate an overall positive perception of the DARE program along with identifying elements of the program that contribute to positive perceptions. An attempt was made to point out various strengths and weaknesses of the selected research. Finally, recommendations for the direction of future research were made.

Chapter I

Introduction

Drug Abuse Resistance Education (DARE) is the most widely used program of drug and alcohol prevention in America's schools. It is normally introduced at the 5th grade level. The 17-week program, taught one hour per week, is presented by uniformed police officers in the classroom.

DARE was started in 1983 in Los Angeles by the combined effort of the Los Angeles Police Department and the Los Angeles Unified School District. Since then, the program has quickly garnered support of local law enforcement throughout the nation and has also gained tremendous political support. By 1994 DARE celebrated the graduation of 40 million students. McNeal and Hansen (1995) reported that in 1993 alone, six million students were exposed to DARE, with an expenditure of \$750 million in public money. Proclamation 7080 by President Clinton officially proclaimed April 9, 1998 as National DARE Day. The proclamation stated that almost 75% of America's schools and in excess of 44 countries around the world were utilizing the DARE program. The President's first goal of his 1998 National Drug Control Strategy was the education of America's youth about the dangers of substance use and abuse.

The DARE curriculum focuses mainly on teaching students about drugs and their dangers, types of peer pressure and how to

deal with peer pressure, improving self-esteem and learning strategies to "Say no" to those who offer or encourage drug use. In addition the program makes students aware of the media influence on drug and alcohol use.

With all of this attention and national support, one would expect a plethora of research supporting the effectiveness of DARE. Unfortunately, the research has not been able to support significant and consistent long-term effects (Dukes & Stein 1997; Dukes & Ullman, 1996; Rosenbaum & Hanson 1998; Zagumny & Thompson, 1997). Most of the research indicates some short-term effectiveness (less than two years) following participation at the 5th or 6th grade level (Dukes & Ullman, 1995). However, long term studies indicate that the control groups and the experimental group (exposed to DARE) show no significant differences (Dukes & Ullman, 1996).

Donnermeyer and Wurschmidt (1997) found that 5th and 6th grade teachers, who participate in having DARE administered in their classrooms, rate the program with overall effectiveness. Lisnov, Harding, Safer and Kavanagh (1998) found that 6th through 9th graders rated DARE (as well as another program called Captain Clean) as significantly more effective than media-based and print ad strategies. On a rating scale of 5 (excellent) to 1 (poor) the DARE program was given an overall mean rating of 4.09, essentially a "good" rating. Interestingly, non-drinkers

and infrequent drinkers rated DARE as being significantly more effective than did frequent drinkers.

The purpose of this study is to review select research studies attempting to evaluate and measure perceptions of the DARE program. The study will focus on variables which students and educators value in developing their perceptions of the program. Extensive research has indicated that DARE produces some relevant short-term reduction in attitudes about and use of drugs and alcohol. However, long-term effectiveness, into the critical high school years, appears negligible. In light of this research, it is surprising that DARE continues to be perceived positively by educators and students. Through review and analysis of existing research, this study will attempt to identify variables that lead to these positive perceptions and provide recommendations for future research.

Chapter II

Review of Literature

Evaluations of DARE have been somewhat mixed. Early research, which was limited to looking at short-term effects, seemed to indicate a definite trend that the program was reaching some of its goals. Further research, however, looking at lasting effects into the critical junior high and high school years, have found little support for significant reductions in substance use. In light of this information, it would be expected that educator and student perceptions of the program would be less than positive. However, that does not appear to be the case.

DeJong (1987) surveyed 7th grade students in Los Angeles, about one year after the experimental group would have received the DARE curriculum. Participating schools were selected to produce equal numbers of DARE participating schools and non-DARE participating schools. The self-report questionnaire asked students to indicate their personal opinion or response to various statements and questions regarding self-esteem, drug/alcohol refusal strategies, use of alcohol, cigarettes and drugs, agreement with D.A.R.E curriculum and prediction of future alcohol, tobacco and drug use. They found that boys who participated in the DARE program showed much less substance use, but girls showed little difference. There was no difference

between groups in prediction of future substance use, indicating that perhaps neither group saw themselves as substance users in the future. Although acknowledging that this was a short-term study, DeJong felt that DARE had a good chance of having long-term effects.

Faine and Bohlanader (1989) studied DARE effects on both suburban and inner-city students with mixed results. Suburban students who received DARE reported positive effects on variables believed to be factors in alcohol and drug use such as self-esteem, resistance to peer pressure and attitudes about drug use. They also had better attitudes towards police. Inner-city students, however, did not report these positive effects. More important, neither group showed any positive effect of DARE in a one-year follow up.

Ringwalt, Ennett, and Holt (1991) found positive effects in some of the components of the DARE curriculum, but could not report a decrease in self-reported drug use by DARE exposed students. Clayton, Cattrello, Day and Walden (1991) reported that DARE students had increased anti-drug attitudes, but there were no differences in actual drug use when compared to non-DARE participants. Furthermore, in a follow up study, Clayton, Cattrello and Walden (1991) found no differences between DARE and non-DARE students with the surprising exception that DARE students reported higher incidence of marijuana use.

Harmon (1993) followed on the heels of Ringwalt et. al. (1991), Faine and Bohlander (1988) and Clayton et. al. (1991), concluding that they had done the only methodologically sound research. Harmon used a self-report questionnaire, measuring both pre and post-test variables approximately 20 weeks apart. Obvious to me is the fact that this is a very short-term study. The results were at least mildly supportive of DARE, particularly on student attitudes against drug use.

Wysong, Aniskiewicz and Wright (1994) had similar surprising results as Clayton et. al. (1991), they found DARE students actually used a significantly greater amount of hallucinogens.

The results of this early research indicate that DARE had some success increasing self-esteem, resistance to peer pressure and perhaps overall social skills. But, the research could not find support for any significant effects of decreased alcohol and drug use.

In their 1995 study, Dukes and Ullman used a more sophisticated design (Solomon Four Group Design) to assess the effects of maturation and pre-testing. DARE reportedly counteracted the natural effects of maturation on attitudes. Overall, the study found that the positive effects of DARE remained stable only through the end of the academic school year.

Dukes and Ullman (1996) followed up their previous study three years later. Maturation appeared to have been a significant factor. Students reported recalling many components of the DARE curriculum but apparently perceived that they had "grown up" since DARE and that the tenants no longer applied to them. Along with maturation, the researches reported a "wearing off" effect of the DARE program, possibly due to its short duration (17 weeks).

Dukes and Stein (1997) followed one more time with a six-year follow up study. Based on the previous research, they did not expect to find any differences between groups. However, they found a difference, an apparent "sleeper effect" of the DARE program. Researches suspected that the reduction of drug use in the DARE group may have been attributed to a reduction in the use of those drugs classified as "hard drugs" such as amphetamines/barbiturates, cocaine, LSD and inhalants. This effect may have been suppressed in the three-year follow up study. In addition, this effect was only observed in males.

In another six-year follow up study, Rosenbaum and Hanson (1998) attempted to research the effects of DARE by some other means than a quasi-experimental design. Their study was conducted as a randomized field experiment with a pretest and multiple posttests. The results of the study did not contradict the previous research. Findings indicated that levels of drug

use were not effected by exposure to DARE. Although the study found short-term positive results, once again there were no sustainable positive effects of DARE into the critical high school years.

Researchers have begun to study just what effect DARE is having on students. Since the research does not seem to indicate it is directly reducing alcohol and drug use, some have shifted the focus to see just what effect it may be having on other variables.

Hansen and McNeal (1997) studied mediating factors of substance abuse prevention to determine what effect DARE had on those mediators. Findings indicate that the primary effect of DARE (as measured by the mediating factors) was to change a student's commitment not to use alcohol or drugs. However, even that finding was of marginal significance. Also of weak significance was the finding that DARE seemed to reduce tobacco use. The researchers suggested that the DARE curriculum needs significant enhancement to address other mediating factors that really can have a positive effect on reducing alcohol and drug use.

Zagumny and Thompson (1997) did a longitudinal study of rural students over five years. The five-year survey results between DARE and non-DARE students did not differ. The only significant difference was found between the sample taken in

1991 and that taken in 1996, suggesting that the difference was caused by the passage of time.

Gleeson (1998) reviewed five large-scale studies consisting of either statewide or nationwide participants. The results suggested that DARE's ability to impact students drug use behavior is limited to the short-term. Suggesting that long-term effectiveness, into the critical middle and high school years, is very questionable. Although Gleeson found that there was some indication that DARE positively effected self-esteem, resistance to peer pressure and attitudes toward law enforcement, her final conclusion was that any effects following DARE are not long lasting.

Researchers have also begun to study perception by students and educators about prevention programs and specifically the DARE program. Sturzinski and Gomez (1996) studied not only the effectiveness of DARE, but also looked at perceptions of the program by school officials, students and parents. Overall, they found very positive perceptions of the program. School official perceptions appeared to be based on the DARE officer's dependability and rapport with students and staff as well as the apparent appropriateness of the curriculum. However, the same study also found few differences in drug usage of 9th graders who had completed the program in the 5th grade and a comparable non-

DARE group. The authors concluded that the DARE program did not achieve its primary goal of reducing future drug use.

Lisnov et. al. (1998) looked at two prevention programs and studied students perceptions of them. Programs such as DARE were rated as being more effective than any other single means of prevention (media, etc.). In response to the DARE program, participants who classified themselves as either nondrinkers or infrequent drinkers rated it more effective than frequent drinkers.

Donnermeyer and Wurschmidt (1997) examined the attitudes of teachers and principals about the DARE program. Both the overall effectiveness and individual aspects of the program were evaluated. A principal and a 5th or 6th grade teacher from each participating school were surveyed (all schools participated in the DARE program). The majority of respondents (96% of surveys were returned) in the study rated the six components of DARE on which they were surveyed as excellent. 34% gave DARE an overall rating of "excellent". These ratings, however, should not be surprising when it is noted that the respondents also indicated that they did not perceive substance use as even being a moderate problem among their students.

Flannery and Torquati (1993), in their study of different prevention programs, found that teachers assessments were based primarily on whether or not they thought the program content was

age appropriate, it's ease of implementation and the perceived effect on students. Clearly, the DARE program fits those three criteria.

Chapter III

Methodology

To best evaluate why DARE is perceived positively even though the majority of studies indicate little to no long-term effectiveness, attempts were made to locate studies regarding perceptions of DARE or other prevention programs by educators or students. Research in this area is limited. The evaluations that were selected for this study attempt to measure perceptions of DARE (and two other prevention programs) by educators and students as well as attempting to determine variables that effect perception. These evaluations were selected due to their limited scope of examining perceptions and variables that influence perceptions of school based prevention strategies.

Perception Studies Selected

- 1. Educators' Perceptions of the DARE Program:** Joseph F. Donnermeyer and Todd N. Wurschmidt (1997) examined educators perceptions of DARE in a midwestern state. The study sought to obtain ratings of DARE and to evaluate what program components educators perceived as important when making there rating.
- 2. Adolescents' Perceptions of Substance Abuse Prevention Strategies:** Lisnov, Harding, Safer and Kavanagh (1998) examined junior and senior high school students' perceptions of two school-based prevention programs. These programs were DARE and Captain Clean, a musical/theatrical based presentation.

Additionally, student perceptions of other prevention approaches were obtained. These included: TV Ads, testimonials by famous people, billboards, and print ads displayed on public transportation.

3. An Elementary School Based Substance Abuse Prevention

Program: Teacher and Administrator Perspectives: Flannery and Torquati (1993) examined the perceptions of elementary teachers and principals regarding Project Pride, a prevention program which provides information about drugs and their effects on the body, self-esteem without drugs, friendship strategies and decision making skills.

Research Procedures

The researcher will review each selected study based on the individual criteria each of the researchers established for their study. Significant findings related to perceptions and factors influencing perceptions of the prevention programs will be documented. A summary of the findings will be discussed. Finally, recommendations will be made for further study of the factors that influence perceptions of DARE and other school based prevention programs.

Chapter IV

Findings

1. Educators' Perceptions of the DARE Program

Joseph F. Donnermeyer and Todd N. Wurschmidt (1997) conducted a study to examine the attitudes of teachers and principals about DARE. The study examined overall effectiveness as well as specific attributes of the program as rated by teachers and principals. This study is the first of a three-phase evaluation of DARE to also include students and parents in the future.

The study was conducted in a mid-western state and used a random sample of 150 elementary and junior high schools. The questionnaire, which was developed by the authors, was reviewed by: three DARE officers, the State Department of Education, and the agency in the state that trains DARE officers. The questionnaire was then reviewed by educators who had experience with the DARE program.

The principal and one 5th or 6th grade teacher from each school was selected by the authors to participate in the study. It was necessary that the selected teacher's class had recently been through the DARE program. In order to improve response rates, researchers employed the assistance of the DARE officers to deliver the questionnaires to the pre-selected teachers and principals. The questionnaires were then mailed directly back to the researchers. This method produced a 96% response rate.

Impact of DARE and quality of DARE were the two dependent variables measured. Analysis of the data consisted of blocked multiple regression. Data was placed in five blocks of variables. The first block contained the six program features of DARE (graduation, question box, officer/teacher interaction, AV materials, student workbook, role-playing and overall curriculum content). Each was rated as "excellent", "fail", or "poor". The second block contained perceptions of student problems relating to substance use (attention in class, defacing school property, fighting, disruptive behavior and poor grades). These were rated as "no problem", "minimal", "moderate", and "major". The third block was perceptions of the amount students from their school use alcohol, tobacco, or other illegal drugs. In the analysis, these were rated as "no use", "little use", or "some use or more". The fourth block contained respondent personal characteristics (position, age, gender, and number of years as an educator). The fifth block contained information about their school (number of years DARE has been sponsored, elementary or junior high, rural or urban).

The results indicated that the majority of respondents did not perceive substance use as even a moderate problem in their schools. Tobacco was perceived as the most commonly used drug (46% felt there was at least some use). 23% and 38% said they did not know how much marijuana and other drugs were used

respectively. Again, the majority did not perceive any problems in school related to substance use. Regarding perception of the DARE program, an overwhelming majority rated all six components as "excellent". On a five point scale regarding overall impact of DARE, only 4% rated a score of "1" and 17% rated a score of "2". 23% felt DARE had a large impact and rated with a score of "5", 23% also rated with a score of "4". The overall program quality of DARE, again on a five point scale, was rated with 35% scoring "5" or excellent, 31% scoring "4". A total of 12% rated the overall quality as "1" or "2".

Program elements were found to be the most significant and influential factors on educator's ratings of DARE. 28% of the variation was explained by the program elements. The higher respondents rated the program elements, the higher their perception of overall program quality was rated. Among the other blocks, relating poor grades to substance abuse and perception of tobacco use were variables that decreased educators perceptions of the impact of DARE. When tobacco was perceived as a greater problem, the overall rating of DARE quality decreased.

2. Adolescents' Perceptions of Substance Abuse Prevention Strategies

Lisa Lisnov, Carol Gibb Harding, L. Arthur Safer and Jack Kavanagh (1998) examined the perceptions of junior and senior high students regarding prevention strategies. The study was done in Chicago, focusing on two school based prevention programs there: DARE and Captain Clean. Captain Clean is a theatrical/musical based production which is followed by interactive discussion and role-playing exercises (Safer & Harding, 1993). In addition to the school-based programs, perceptions of other prevention methods were also obtained. These included: TV ads, testimonials by famous people, billboards, and ads displayed on public transit.

The sample was taken from Chicago public school students in grades six through nine. Students were primarily African American and Hispanic/Latino, from low-income families, and identified by school administrators as "high risk" for substance abuse. All 719 students in the study had received the DARE and Captain Clean programs.

Using a survey instrument, students were asked to assign a letter grade (A through F) which was later translated to a Likert-type scale rating (1-5) for statistical analysis. Students rated the strategies based on their perceptions of the following objectives: 1. How well does this strategy prevent

teens from using drugs and alcohol? 2. How well does it help them resist peer pressure to use drugs? 3. How well does the strategy encourage students to seek help if they have a drug problem? 4. How well does the strategy provide information on where to get help for a drug problem? These four objectives were considered proximal because they directly address the issue of alcohol and drug use. Two distal objectives were also measured: 1. How well does this strategy help students discuss their feelings surrounding personal situations and issues they are facing? 2. How well does the strategy relate to students' ethnic/racial backgrounds?

Dunn's multiple comparison procedure was used to compare results. Both school-based programs were rated as significantly more effective than any of the media methods (billboards and ads on public transit were rated the lowest). Comparison of the two school-based programs revealed no significant differences in effectiveness at addressing the four proximal objectives (DARE's mean rating was 4.09 and Captain Clean was 4.05). Captain Clean, however, was rated significantly higher than DARE on the two distal objectives.

Students were grouped based on their reported frequency of alcohol consumption: non-drinkers, infrequent drinkers, and frequent drinkers. Frequent drinkers rated DARE significantly less effective than non-drinkers and infrequent drinkers.

3. An Elementary School Substance Abuse Prevention Program:

Teacher and Administrator Perspectives

Daniel J. Flannery and Julie Torquati (1993) studied the perceptions of teachers and principals in a school district that used a prevention program called Project Pride. The program had been used in the school's kindergarten through sixth grade classrooms for the previous eight years. The program was taught by classroom teachers after a one-day training workshop.

The purpose of the author's research was to: 1. Examine the level of teacher and administrator satisfaction with Project Pride. 2. Examine the level of implementation of Project Pride. 3. Identify factors related to satisfaction and program implementation.

The study was conducted in a medium sized southwestern city with a diverse student population. A total of 101 teachers and eleven principals from eight elementary schools were surveyed. 31% of teachers and 100% of principals responded to the survey.

All participants were asked to rate their general satisfaction as well as factors which related to satisfaction and implementation. These factors were: 1. Amount of training. 2. Appropriateness of materials for grade level. 3. Perceived ease of implementation. 4. Parent participation. In addition, teachers were asked to rate administration support for the program. Principals were asked to rate their perception of

teacher satisfaction, their own level of support, and the level of implementation in their school.

The results showed that 72% of teachers reported general satisfaction with the content of the program. 10% reported dissatisfaction. Most teachers (73%) reported that the materials were clear and easy to follow, but 92% reported difficulty implementing activities in the classroom at least sometimes. 15% of teachers reported they never use the program activities in their classroom. About 70% of teachers either agreed or strongly agreed that Project Pride was valuable and beneficial to their students.

Correlational analyses found that the degree of satisfaction with content of the program was related to how valuable teachers viewed the program. The degree of benefit was positively related to age appropriateness, frequency of use, and difficulty in implementing into the classroom curriculum.

Summary

This evaluation of research examining perceptions of the DARE program and similar prevention programs illustrates various strengths and weaknesses. Donnermeyer and Wurschmidt's (1997) research produced an excellent response rate from educators. However, the respondents may have been biased since the surveys were given to them by the DARE officer, increasing the chance that respondents would feel inclined to rate the program more

favorably to please the DARE officer. The blocked multiple regression analysis allowed the researchers to attempt to not only determine what educators perceived about the impact and quality of the program, they also were able to attempt to measure the factors which influenced their opinions.

Lisnov et. al. (1998) measured student perceptions of DARE and Captain Clean based on four proximal and two distal objectives. Most importantly, they found that students perceived both programs as more effective than TV ads, testimonials, billboards, etc. Respondent's overall rating of both DARE and Captain Clean was in the "good" range. Additionally, by categorizing respondents based on their reported alcohol consumption, they were able to compare ratings given by students based on their level of consumption.

Flannery and Torquati (1993), while not specifically researching DARE, attempted to research educators perceptions of a school-based prevention program and focused on the factors educators found important in such a program. This research is questionable due to the poor response rate of teachers who received surveys. Although overall ratings were positive, the poor response rate makes one question the perceptions of those who did not respond.

Chapter V

Implications and Recommendations

The question of why DARE remains so popular has yet to be answered. The research presented here gives some insight into that issue, although this research has limitations. First, there is very little research in this area and the three studies presented in this research represent most of what has been done. Further research into the characteristics educators and students perceive as valuable elements in a prevention strategy should be completed. It appears that educators support DARE because its program elements are perceived as age appropriate and focus on pertinent proximal objectives. However, we need to determine if those program elements are the same ones that are effective at preventing alcohol and drug use. Educators also rate the DARE officers highly for their participation as representatives from law enforcement and for their positive interaction with children. Future research could address differences among law enforcement officers (such as gender, age, etc.) to see if perceptions differ based on those traits. The research also seemed to indicate that teachers felt that a program's ease of implementation was an important factor in how they perceived a prevention program. Having a law enforcement officer bring and deliver the curriculum can, in my opinion, be considered easy implementation from the teacher's point of view. Ease of

implementation is a good thing and certainly should be valued by educators. But, ease of implementation should not preclude effectiveness. Future study should include curriculum and delivery changes to make DARE more effective long-term.

Dusenbury and Falco (1997) point out that reinforcement and follow-up are critical to prevention program success and that we should not be surprised when the positive program effects disappear after the program ends. Although it may be easy to implement this program in 17 weeks, research should look at the possibility of improving long-term effectiveness by increasing follow-up and reinforcement in the years following the initial core curriculum is introduced. Although a junior and senior high DARE curriculum does exist, Gleeson (1998) reported that it is rarely used.

Donnermeyer and Wurschmidt (1997) suggest that prevention strategies are rated higher when educators believe that the school environment is relatively trouble free. Based on that assumption, it would seem logical that educators perceptions of DARE would be positive considering that most elementary school might be considered trouble free. Future research might address perceptions of DARE by educators in elementary schools that would not be considered trouble free. We have already documented that students who are frequent users of alcohol or

drugs rate DARE less effective than non-users (Lisnov, Harding, Safer & Kavanagh, 1998).

News of the research on DARE's effectiveness is surfacing and beginning to have an impact on those who choose whether or not to embrace the program. Cities like Spokane and Oakland dropped the program in 1996, while New York jumped on the DARE bandwagon with the enticement of free materials from DARE headquarters (Gillespie, 1997).

Perhaps DARE is not as effective as most perceive it to be. Clearly, it has elements that are perceived highly enough to have allowed it to garner wide support. The problem for future consideration is whether the program can be modified or enhanced to bring its level of long-term effectiveness closer to its overall ratings by educators and the public. I would recommend that further research be directed at students who are at least two years post DARE participation. Future research might assess student's perceptions of what is effective and ineffective about the program. The research may take a similar structure to that of Donnermeyer and Wurschmidt (1997), considering how they measured elements of DARE and how they impacted student perceptions. We have some idea why educators perceive DARE positively. However, the population this program intends to reach is pre-adolescent and adolescent students. Information

should be obtained from students to determine what factors influence their use and resistance to drugs and alcohol.

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