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ABSTRACT

AN EVALUATION OF THE STUDENTS, TEACHERS, AND RESIDENTS INVOLVED IN DRUG EDUCATION (S.T.R.I.D.E.) PROGRAM

By

Javon Jackson

The present study performed an experimental evaluation of a drug education program in two local high schools. It was hypothesized that the students who received the drug education program, when compared to a control group would: (1) score higher on an overdose drug knowledge test; (2) score lower on a drug usage test; (3) score higher on a self-esteem test; (4) score higher on an empathy test. The results supported only hypothesis four, i.e. students receiving the drug education program did better on the empathy test than the control students. Therefore, there were no significant differences between the experimental and control students on the drug knowledge, drug usage, or self-esteem tests.

AN EVALUATION OF THE STUDENTS, TEACHERS AND RESIDENTS INVOLVED IN DRUG EDUCATION (S.T.R.I.D.E.) PROGRAM

By

Javon Jackson

A DISSERTATION

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DEDICATION

This dissertation is dedicated to my parents,

The S.T.R.I.D.E. Drug Education Program,

The Comprehensive Drug Treatment Programs,

and to better drug abuse understanding.

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CHAPTER 1

INTRODUCTION

I. The Problem

A number of educational programs have been developed in response to increasing drug abuse in schools and in communities in general. In response to these drug problems, rehabilitation and treatment programs were developed although drug specialists felt that the only real hope in dealing with drug abuse was prevention. Nevertheless, the accumulation of studies in connection with drug abuse has been concentrated mainly on treatment aspects of drug addiction, the relationship between narcotics and social and cultural factors, or characteristics of drug users and their families (Laskowitz, 1965; Nyswander, 1956; and Preble, 1966).

Although there has been little known research done in this particular area, there has been legislation passed and many have displayed an interest in the preventive aspects of drug abuse as well as in drug education programs. It has been assumed that drug education courses, through a dissemination of knowledge concerning the nature and effects of

drugs, would play an important role in the prevention of drug abuse (Amendolara, 1973).

Although the national significance of drug education is indicated by the large amounts of government and private funds going to programs designed to have a variety of effects on what is often referred to as the "drug problem", recent reviews (Richards, 1971; Wald and Abrams, 1972), however, indicate that although many such programs exist, little is known about what methods are effective for what groups.

Because there is some disagreement about what the goals of drug education should be, many educators feel that the primary goal should be to reduce drug usage. This is measured by asking students before and after taking a drug course how much they use drugs (often limited to marijuana), or whether they intend to use them.

Berg's (1970) review of 71 drug usage surveys clearly indicates that drug abuse, especially among the young, is rapidly increasing.

Increasing knowledge about drugs and drug usage is another goal of drug education. Although it is a goal which is more likely to be affected by education than is drug usage itself, few programs have reported on their success with respect to this goal.

Another rationale for drug education programs has been to increase knowledge about drugs. While people routinely use drugs, they are considerably ignorant of drug effects.

This goal stems from data of numerous surveys which indicate a steady increase in the use of drugs over the past five to ten years (Berg, 1971). This common usage of drugs by people show that drugs are less associated with extreme attitudes and ideologies (Goldstein and Korn, 1972). For example, drug usage is not an exclusive characteristic of students, but it is an important aspect of adult life as well (Mellinger, Balter, and Manheimer, 1971; and Parry, 1971).

While the usage of drugs has become more routine, ignorance about drug effects is widespread. In a survey conducted in 1968, 6,105 residents of New York State were asked to list the effect of several drugs. The most striking finding by Korn and Goldstein (1972) was the number of respondents who answered, "Don't Know": 50% for heroin, 48% for amphetamine, 42% for LSD, and 36% for marijuana (Glaser and Snow, 1969). That same year, a survey by Korn and Goldstein (1972) on an urban university campus (N-3,010) found that, of students who responded, 21% did not know whether heroin is addictive; 54% did not know that barbiturates were addictive, and 56% thought that hard liquor is not addictive. A follow-up survey of seniors in 1972 showed some reduction in these figures, but the extent of ignorance was still impressive.

Similarly, the Delhi University study (1972) further found . . . that a great many young persons who experiment with illicit drugs have no valid knowledge about the possible legal and psycho-physiological consequences of their actions. It is reassuring that the vast majority of students, users

and non-users alike, are eager for more knowledge about drugs and their effects. However, since many students depend upon a misinformed peer group, relevant and honest education is clearly needed.

Reacting to this problem, public and private agencies are funding an incredible variety of drug education programs, few of which are subjected to even nominal evaluation since the scant evidence that does exist suggests that with few exceptions most drug abuse prevention programs have negative, or at best, null effects (Jaffee and Clark, 1972; and Macro Systems, Inc., 1972).

Brown and Klein (1975) concluded that present drug education programs are not significantly effective in changing attitudes toward drug abuse. And, Seabright (1973) found that the most common evaluation technique was to compare knowledge of drugs at the end of a program with knowledge before the program, and, in most cases, drug knowledge increased. However, relatively little attitude change was found to occur when attempts were made to evaluate programs by examining changes in attitudes toward drugs.

Similarly, Robert L. DuPont, director of the President's Special Action Office for Drug Abuse prevention, has recently cited evidence of the failure of most drug-abuse educational effects (DuPont, 1974):

"1. A survey of drug educators indicated that nearly three-quarters believed present drug abuse materials were ineffective and had stopped using them,

2. 1,500 students were surveyed regarding their attitudes toward existing drug-abuse information programs in their schools and the concensus of their opinions was that such programs were outdated and should be abolished,

3. The National Coordinating Council on Drug Education noted major inaccuracies in 84 percent of all current drug-abuse educational films,

4. A report from the National Education Association's Task Force on Drug Education indicated that funds for drug-abuse education were being misspent on poor material and misinformation.

Not only have drug education programs generally failed to reduce drug usage, but, in some cases, the drug education program may have actually increased drug usage (Stuart, 1974; Wong and Zimmerman, 1974).

The general conclusion is that drug education programs have been unable to achieve this goal (Swisher, Warner, and Herr, 1972). This is probably because drug usage among adolescents is a highly social activity more subject to influence by peer and family relationships than by formal classroom education (Blum, 1972).

II. Factors Accounting for the Failure of Previous Drug Education Efforts

What are some of the factors which may account for the failure of previous drug education programs to decrease drug abuse?

A. Peer Influence

Many drug education programs may have failed to reduce drug usage because their curriculum and teaching style ignored the importance of peer influence in drug taking behavior.

Zimering (1974) found that students believed that one of the primary reasons why people take drugs was to emulate their friends. In general, students believed that people began using drugs between the ages of twelve and fifteen. These results indicated an increased peer pressure to use or try to use a drug between the ages of twelve and fifteen (sixth through ninth grades). This information is in agreement with his findings that during this time period the most dramatic increase in exposure and usage of drugs occurs. In addition, the amount of peer pressure experienced increases as the student advances in age.

Further supportive evidence by Wolfson, Lavenhar, Blum, Quinnones, Einstein, and Louria (1972) showed that "more than 80% of the students who admitted to the use of drugs for other than medically approved reasons were introduced to drugs by someone whom they knew very well. The person who introduced the male students to drugs in each of the school classes was most likely a high school boyfriend. The person who was most likely to 'turn on' the female students varied from class to class. The freshmen girls were first introduced to drugs mainly by a high school girlfriend (35%), by a high school boyfriend (24%) or by a sibling (21%). Senior

girls were 'turned on' primarily by a high school girlfriend (30%), by a high school boyfriend (28%), or by a college boyfriend (13%). Only 7% of the senior girls were introduced to drugs by a sibling."

The Delhi University study (1972) found that in a sample of 100 subjects that 79 subjects chose their friends as their initial source of drug usage, while 20 subjects chose no outside source and only one participant chose one's doctor as one's source of initial drug usage.

Not only are students frequently initiated into the drug culture by peers, the peer group is also involved in sustaining the students in the drug culture. For example, Polk (1970) found that adolescents who were regular drinkers were more alienated from school, and were more involved in peer group relationships. Thus, it appears that school programs are destined to reach those who least need the information. While youth crave information about the drug culture surrounding them, information must be delivered in palatable form, if drug education programs are to be effective.

It is clear from these studies that a drug education program which ignores the influence of peers and relies solely on a lecture format by adult authorities has little chance of reducing drug usage.

B. Drug Abuse is only a Symptom

Failure to recognize that drug abuse may only be a symptom of more pervasive personality problems and feelings

of alienation may partially account for the failure of previous drug education programs.

Graham and Cross (1975) found that the drug users, as a group, displayed a set of values differing from non-users in that the users were more individual value oriented, subjective, unstructured, and anti-religious. Drug users also felt rejected at home, that there was little to talk about in common with their parents, and that their parents did not trust them or genuinely care about them. Perceiving a lack of concern on the part of school officials and faculty over whether they used drugs, attended classes, or in general abided by the school regulations, the drug users, consequently, felt that no one cared about what they did as long as they did not start trouble for others.

Similarly, drug abusers tend to have less self-esteem than non-abusers. For example, Poe, Boynton, and Allman (1972) in their study found that non-abusers had higher positive self-concepts, reflected selves and ideal selves than drug abusers who had more negative self-concepts and reflected selves.

The Delhi University study (1972) stated that students who were generally satisfied with their self-image were found less frequently in most of the drug user groups than those who wanted to change many things about themselves. However, the relative risks associated with low self-esteem were not particularly high, reaching a maximum of 3 to 1 for heroin usage. However, it is difficult to determine whether low

self-esteem predisposes to drug usage or whether drug involvement lowers an individual's self-image.

Samuels and Samuels (1974) conducted a study to determine if low self-concept is a common denominator as a causative factor of drug abuse among adolescents. Their results indicated that 75.5% of the Ss considered low self-concept to be one cause of their turning to drugs and 91.9% felt that boredom and curiosity was another while 67.5% put the blame on peer pressure and 64.8% said that they were pleasure seeking.

Other researchers have also recognized this need. Dohner (1973) stresses the point that greater emphasis must be placed on non-chemical alternatives to the search for self-knowledge, for meaningful human relations, for enduring values and for spiritual experiences. He suggests one alternative is through "personal awareness development" whereby people develop their interpersonal awareness by learning to be aware of their own feelings, attitudes, and perceptions in order to evaluate the effect of their behavior on others. Philosophical-essential explorations is another alternative for youths. They seek personal meaning in their lives. They desire to find the answers to the questions "Who am I? What is my future, my goal, my role in society?" This is a difficult search because of the accelerated mobility of the American society, the loosening of family ties and the rapid rate of change.

C. The Fallacy of Rationality

Many drug education programs may have failed because of an unwarranted faith in the rationality of students. They assumed that by providing information on harmful effects of drugs, students would make a rational decision not to use drugs. They used structured curricula, which presented factual information with very little student participation.

However, several studies have found that a relatively high level of knowledge about drugs is associated with higher levels of drug usage, not lower usage as predicted by the the rational model. In a survey of adolescents in four Michigan communities, Stuart and Schuman (1972) found that: The non-users of every type of drug were found to have lower drug information scores than did the users, the difference being statistically significant for every drug except alcohol.

By administering a scale to a large and varied population of students to assess affective, cognitive, and behavioral factors regarding drugs before and after a factual drug program, Hoffman (1971) found that the more knowledge people possessed about drugs, the more their attitudes were in favor of drug usage.

Fejer and Smart (1972) provided some suggestion as to the temporal order involved in the association between drug usage and attitude. Their results indicated that relatively permissive attitudes, as well as, above average knowledge, about drugs occur prior to actual usage. However, non-users

intending to use marijuana were still less in favor of legalization and had less knowledge about drugs than users. This suggested some changes do occur in both attitude and acquisition of knowledge after initiation of usage.

While these correlational findings do not demonstrate that increase in drug information necessarily cause or even catalyze increases in drug usage--they do suggest that drug information per se is unlikely to inhibit usage.

Although his research had some methodological flaws, Stuart's (1972) evaluation of drug education programs supports the contention the didactic drug education programs which rely on students processing information on drugs and making a rational decision not to abuse drugs are misconceived. Relative to controls, Ss receiving drug education significantly increased their usage and sale of marijuana and LSD and their usage of alcohol while showing a significant increase in drug information and a decrease in worry about drugs.

Similarly, Wong and Zimmerman (1974) concluded that their drug education program actually taught students to handle drugs in a safer manner because a decrease in drug related hospitalizations among their target group of students may not, in fact, have represented a decrease in usage, as they had previously assumed. In addition, they report no evidence that "audience appealing innovations such as ex-addict testimonials, tape recordings, movies,

role-playing techniques, etc." reduced drug usage. In fact, 33 percent of the participating students felt that the program actually encouraged illegal drug usage.

Korn and Goldstein (1973) presented evidence concerning achievement of cognitive objectives in a college course on drugs. A mastery grading system insured that students learned to criterion. Reported experience with drugs did not change during the course and was unrelated to measures of learning and student ratings of the course and the instructors. Concern for friend's drug usage did increase and changes were observed in preferred sources of advice and information.

Thus, students increased their willingness to ask drug course instructors for drug advice and increased their willingness to use more technical sources for information on drugs instead of less informed sources.

Linder, Lerner and Drolet (1973) also found that drug usage among students taking a drug abuse course was significantly greater than among those students not taking such a course. Unfortunately, the research design was not adequate to determine whether the drug education caused the higher usage or whether higher drug users were more likely to enroll in this course.

However, Korn and Goldstein (1973) findings did not support the idea that drug education encouraged experimentation with drugs.

In conclusion, while methodological limitations of some of the previous studies make it impossible to conclude that drug education programs actually lead to an increase in drug taking behavior, the studies clearly indicate that a rational, factual presentation of drug information is not sufficient for reducing drug abuse among students.

McKee (1973) amplifies this point and makes some suggestions regarding the structuring of drug education programs.

For instance, he found that drug users, being much more knowledgeable about drugs than non-users, were aware of the fallacy of considering "drugs" in a general, all-encompassing fashion, and instead made sharp distinctions between drugs, whereas non-users continually fail to do this.

Although drug users indicated that they sometimes had traumatic experiences with drugs, they invariably mentioned that they would continue to use certain drugs in the future.

Therefore, McKee suggested that prevention/educational programs should take into consideration both a large attitudinal difference from non-users and a certain sophistication among drug users, even at the high school level.

III. Implications for Designing Drug Education Programs

Assuming the factors surveyed in the previous sections do partially explain the failure of previous drug education efforts, how should future drug education programs be designed?

A. The Teacher

The style of formal drug education programs beyond curricular problems often alienates youth. Because moralistic presentations abound (Helmes, 1970) and because of the sensitivity of youth to hypocrisy, an entire talk can be rejected on the basis of one bit of misinformation. Effective drug prevention approaches should allow for intensive interactions among participants (Capone, McLaughlin and Smith, 1973)--a format that is not easy to bring about in classrooms. The active involvement of participants is required when teaching rational decision-making about drugs--not just a lecture by an expert or a talk by a former addict.

Nail and Gunderson (1975) found that authorities in drug abuse education agree that whoever presents the information must be someone who knows and will present facts accurately, who will feel comfortable and free in open discussion, and who young people will like and trust.

Galli (1974) found that the former drug user was overwhelmingly chosen by students (46.46%) as the person who should have the primary responsibility for presenting drug information.

Similarly, Illinois drug education programs (Brown, 1973) have switched to a broader curriculum where drug abuse is taught within the context of other health issues such as consumer health, mental health, human growth, and development, nutrition, and disease. Teachers in Illinois have not been asked to totally abandon a didactic format when

presenting legal, historical, and pharmacological information on drugs, but they have been asked to adopt a "soft-sell approach" and be more sensitive to their students' needs and interests.

Since most school-based programs tend to be didactic, moralistic presentations that do not reach the youth who most need drug information, Sorenson and Joffe (1975) conducted a peer oriented drug education program in a community youth project. There youth and leaders shared feelings and knowledge about drugs in a candid atmosphere. Youth made decisions about program direction, format and curriculum. The authors concluded that peer oriented community-based drug education programs provided a viable format for reaching youth with information and encouraging them to make decisions about drug usage based on rational factors.

The theory underlying the New York City Peer Group Leadership Program (Capone, McLaughlin, and Smith, 1973) was that students know more about the drug problem than do most teachers and other adults, and that they can more effectively persuade fellow students to refrain from using narcotics.

The experience of the Peer Group Leadership Program was that the students soon expressed concern about better communications with adults, parents, and community; how to relate to their peers and to deal with drug related issues, including drug emergencies.

Thus, it would appear that one possible consequence of involving peers in the teaching of drug education programs is a broadening of the curricula and the participants.

B. The Curriculum

The teacher is not the only target for change in drug education programs. Critics have insisted that the content of drug education programs should be changed as well as the style in which the content is presented.

School-based drug information programs often have employed the narrow perspective that drug usage is a problem of youth, not recognizing the extent to which drugs affect society more broadly (Levy, 1972). Levy believes that drug education curricula should de-emphasize facts about drugs per se and focus more on the reasons that people use them. Thus, effective drug education programs should change an individual's knowledge and value system (Piorkowski, 1973; Myers, 1973) and require him to assess the consequences of drug involvement.

As has been previously stressed, many educators consider drug abuse a symptom of more pervasive problems in self-development. Therefore, a number of drug education programs have recently broadened their curriculum to include possibilities for self-growth. For instance, Kane (1973) considers "Humanistic Education" as an important educational approach to drug education. He stresses the affective domain: students' feelings, fears, wishes--the things that

motivate them behaviorally. However, Kane feels that before a teacher can be effective in meeting the student's needs for self-understanding, interpersonal relations, values clarification, problem-solving and decision-making, one must know one's self by being able to confront one's own feelings, to demonstrate sensitivity to students' feelings and to show a clarity of consciousness about one's own values.

Myers (1973) reported on the drug education curriculum developed by the Educational Research Council of America and the Dayton and Lima Public School systems which also emphasizes development of the full potential of the human individual as its primary objective. This includes helping do what we do and why we do it the way we do it--and increased clarification of one's values and purpose of life.

Another broader based curriculum of drug education can be found in behavior group counseling developed by Horan, Shute, Swisher, and Westcott (1973). Their curriculum combines elements of the previous humanistic approaches with structured exercises. A typical workshop program would consist of a lecture on drug abuse prevention strategies with accompanying communication exercises.

Two techniques which have been used in a variety of self-development approaches to drug education, including the program evaluated by this author, are values clarification and empathy training. Values clarification is a technique developed by Raths, Harmin, and Simon (1966). Teachers using this technique encourage students to make

thoughtful choices, to examine alternatives, and to consider what they value and cherish. They then encourage them to act on their values and to examine their actions to see if they are consistent with the values that they espouse. Teachers using this method tend not to answer, but give a less definitive response which tries to focus the student so that he can discover his own beliefs on a particular topic.

While values clarification aims at having the student discover his own beliefs and values, empathy training attempts to develop the communication skills of an individual so that he can facilitate growth in others. Much of the research on empathy training comes from psychotherapy research where considerable support exists for the assumption that effective psychotherapy at least in part is contingent upon the patient's perception of the therapist as empathetic congruent, and having nonpossessive warmth (Truax and Carkhuff, 1964). Of these factors, accurate empathy (AE) has received the most support (Truax and Carkhuff, 1967). Truax and Wargo (1966) have stressed that most, if not all, psychotherapeutic orientations have emphasized the importance of the therapist's ability to understand the patient's "inner world" and to communicate this knowledge sensitively and accurately to the patient. Moreover, fourth-year post-graduate clinical psychology students have significantly used accurate empathy to bring about positive therapeutic results in patient's that they had treated (Bergin and Solomon, 1963).

There is also increasing evidence that suggests that empathy is "teachable" to professionals and to minimally trained nonprofessional people (Truax, Carkhuff, and Douds, 1964).

Reddy (1969) found that behaviors such as empathy are teachable which supports the findings of Truax, Carkhuff, and Douds (1964) and Truax and Carkhuff (1967).

Interpersonal Process Recall (IPR) is a procedure for teaching empathy which has been developed at Michigan State Unviersity by Dr. Norman Kagan and his associates over the last 12 years.

This method is designed to enable people to learn to be more effective in their interpersonal relations and to have a positive influence on human interactions.

Although the IPR process has been used primarily to teach people in the helping professions (counselors, physicians, psychologists), Kagan (1973) felt that IPR could be of great benefit by producing significant and measurable results in improving the quality of life in an MSU dormitory hall. The results were encouraging, but not conclusive, mainly due to the fact that so few students were IPR trainers in the dormitory. IPR is the empathy training technique used in the program evaluation in this present study.

In summary, perhaps the most complete list of suggestions for improving drug education programs has been provided by Mathews (1975). "1. Students should be involved

in the planning and implementation of every drug program that concerns students.

2. Drug programs must have clearly defined purposes when they are designed, and they should be ongoing, not crisis-oriented.

3. Systematic and well-designed evaluation is critical for every drug program.

4. The emphasis of drug programs should be on affective learning, not cognitive learning. The focus should be on people, not drugs; and on "why", not "what" or "how" (See D'Elia and Bedworth, 1971).

5. Group-process communication training should be provided to teachers so that they can learn to listen and better facilitate discussions with students (see Dearden and Jeckel, 1971).

6. An environment should be provided that encourages free, honest and serious discussion of student problems.

7. Participants in any drug program should be actively involved, not passively listening to a speaker or watching a film.

8. Existing printed materials and films should be greatly de-emphasized or eliminated, and that which is used should be carefully evaluated, paying particular attention to evaluations made.

9. Look into peer counseling and value clarification techniques for possible application in one's school.

10. The school should not try to combat drug problems alone,

but in consort with other agencies and people in the community."

IV. The S.T.R.I.D.E. Program and Hypotheses

The present study is an evaluation of the Students, Teachers, and Residents Involved in Drug Education (S.T.R.I.D.E.) drug education program which was developed by the Comprehensive Drug Program under the direction of Bill Stevens in Lansing, Michigan. The S.T.R.I.D.E. program incorporates many of the principles of the self-development approach to drug education described in the previous section. A complete description of the S.T.R.I.D.E. program can be found in Chapter II.

While a survey evaluation of the S.T.R.I.D.E. program indicated that 80 percent of all program participants described their experiences in the program in positive terms, the developers of this S.T.R.I.D.E. program were not content with these testimonials and approached the author for a more rigorous evaluation. They agreed to randomly assign students who wished to participate in the S.T.R.I.D.E. program to either the S.T.R.I.D.E. program or a nontreatment control group.

Based on the goals of this S.T.R.I.D.E. program, the following hypotheses were tested:

1. After treatment, S.T.R.I.D.E. participants would be more knowledgeable about drugs and drug emergency procedures than the control group.

2. After treatment, S.T.R.I.D.E. participants would use fewer drugs, especially dangerous drugs, than the control group.
3. After treatment, students receiving the S.T.R.I.D.E. program would feel more positive self-esteem than the control group.
4. After treatment, the S.T.R.I.D.E. participants would be more skilled in empathy skills than the control group.

CHAPTER 2

METHOD

Subsystem

The Students, Teachers, and Residents Involved in Drug Education (S.T.R.I.D.E.) program is a community mental health program serving Clinton, Eaton, and Ingham counties.

S.T.R.I.D.E. is an innovative drug abuse prevention program designed to enable individual communities and school districts to use local human resources and talents to establish and operate on-going, independent, effective drug education programs within their own communities.

S.T.R.I.D.E. is a fifty hour, multi-phase workshop designed to reach the following objectives:

1. Reach all segments of the community and school system population. (Ideally, equal numbers of parents, students, and teachers participate in the program.)

2. Convey concrete learnable skills which can be used to counteract the causes of poor drug education and drug abuse which are (a.) the lack of personal communication skills and trust between various population segments; (b.) the lack of understanding of differing life-styles and value systems; (c.) the misinformation concerning both legal and

illegal drugs; (d.) the inadequate personal problem-solving skills to deal effectively with the day-to-day problems. (Each phase of the program represents a skill-oriented, mini-workshop concentrating on one of the above listed causal areas. These phases will be described in detail later.)

3. Create an environment where an optimum learning experience can take place in a short period of time. Most program phases take place in small skill-groups operated during school hours with teachers and students being released from classroom responsibilites. Expenses involved in releasing participants from classroom responsibilities were absorbed by the school system. The S.T.R.I.D.E. program, in turn, provided all personnel involved in training free of charge.

4. Trained interested local participants as instructors in all phases of the S.T.R.I.D.E. program and thereby provide the community with the adequate human resources needed to operate self-sufficient local programs. (A follow-up instructor training workshop is offered, at no further expense, to interested program participants on two consecutive weekends sometime after the initial workshop.)

Phases of the Workshop

The phases include:

1. Orientation
2. Communication Skills

3. Value Clarification

4. Problem-Solving Skills

5. Drug Information and Crisis Training

1. Orientation - The orientation phase lasted one half of a day. In this phase, Ss learned the logistics of the S.T.R.I.D.E. operation. They were informed about their scheduled classes and classrooms, break times, and books. They were told what the S.T.R.I.D.E. goals were and were welcomed to criticise any parts of the S.T.R.I.D.E. program that made them feel uncomfortable as well as discussed any personal problems that they had.

2. Communication Skills Workshop - This phase lasted all day Saturday and Sunday. In this phase, Ss were taught the first step in the helping relationship which was empathy. Empathy was emphasized, because it allows the speaker to feel safe and not to be judged or condemned because of his feelings. Students were taught that when the listener responds to a speaker empathetically, he can feel comfortable and will continue talking to the listener. As the listener builds trust in this way, the listener facilitates both his own and the speaker's understanding of the speaker's feelings, and the listener helps him get a better handle on his problem. Lastly, the Ss were taught that the listener will be learning to listen, to understand, and to communicate that understanding. It is not enough for the listener to listen unless he understands what he has heard. It is of little use for the listener to understand unless he communicates. It is

useless for the listener to communicate unless the speaker can use the information.

3. Values Clarification - The values clarification phase lasted one half of a day. In this phase, Ss were taught to help the speaker clarify his feelings and explore the speaker's thoughts about his problem. The Ss focused on the kinds of issues the speaker saw as positive (rewarding) and those they saw as negative (punishing). They helped the speaker integrate his feelings with how he thought about his problem: the values and attitudes he attaches to his experiences.

4. Problem Solving - The problem solving phase lasted one day. In this phase, Ss were taught to help the speaker clarify his problem, explore alternatives, plan strategies for change, and test out alternatives.

5. Overdose Aid - The overdose aid phase lasted two days. In this phase, Ss were taught overdose aid and crisis intervention techniques.

It was impossible to guarantee that the Ss in the experimental groups received precisely the same treatment in all details. While some lecture sessions for both groups were all given by the director of the S.T.R.I.D.E. program, in some other sessions small group work was emphasized and additional trainers were required. Thus, while the same number of sessions was allowed for each activity, the way that the material for each session was covered varied somewhat.

All Ss received high school credit for completing the course. All Ss had at least one year of high school remaining. Although students comprised only one-third of each drug training class with residents and teachers filling the remaining positions, the focus of this evaluation was on the effects of the program on students.

Subjects

This study originally consisted of 72 Ss and was completed by 45 Ss (experimental = 18, males = 5, females = 13; control = 27, males = 3, females = 24). From the Eaton Rapids schools, 11 experimental (males = 3, females = 8) and 24 control (males = 2, females = 22) Ss completed the assessment at all three time levels. From Sexton High School, 7 experimental (males - 2, females = 5) and 3 control (males = 1, females = 2) Ss completed the assessment at all three time levels.

The age range was 13 to 17 and the mean age was 14.844. The grade range was 8th to 11th and the mean grade was 9.378. All of the Ss were White except one Chicano male from Sexton High School.

Design

Since all of the Ss were obtained from a pool of volunteers from each of these three schools which had expressed a desire to participate in the S.T.R.I.D.E. program, half of the Ss from each respective school were randomly assigned to the experimental group to participate in the

S.T.R.I.D.E. program. The other half of the Ss served as the control group.

The design was a pre-test--post-test--post-test design. The pre-test was administered one week before the experimental treatment. The first post-test assessment occurred three weeks after the treatment. The final post-test occurred 8 months later.

Table 1 shows each school at each time level denoted by 't' in Table 1. At 't-1', the pre-test observation (O_1), the number of control Ss is listed as well as the date of the first assessment. At 't-E', the experimental treatment (X), the number of experimental Ss is listed as well as the data of the experimental treatment. At 't-2' the post-test observation (O_2), the date of the second assessment is listed as well as its phase interval in days and months from the initial observation (O_1). At 't-3', the follow-up observation (O_3), the date of the third assessment is listed as well as its phase interval.

Procedure

Pre-test Assessment volunteers for the S.T.R.I.D.E. drug education program were seated in the Eaton Rapids High School cafeteria. These volunteers included both the intermediate and high school Ss while volunteers from Sexton High School were seated in a reserved classroom. The director of S.T.R.I.D.E. introduced the E and reassured the Ss that everything was safe.

Table 1

The Treatment Design

Schools

Time		't-1'	't-E'	't-2'	't-3'	't-1' 't-2' 't-3'
I. Eaton Rapids	N=49	O_1	X	O_2	O_3	
Experimental Ss	N=16	O_1	N=16	O_2	O_3	
a. Assigned		a. N=16		a. N=16	a. N=16	a. N=16
b. Completed		b. N=16		b. N=13	b. N=12	b. N=11
p. Percent Completed		p. N=100%		p. N=81%	p. N=75%	p. N=69%
Control Ss	N=33					
c. Assigned		c. N=33		c. N=33	c. N=33	c. N=33
d. Completed		d. N=33		d. N=28	d. N=23	d. N=24
p. Percent Completed		p. N=100%		p. N=85%	p. N=70%	p. N=73%
T. Total both groups		T. N=49		T. N=41	T. N=35	T. N=35
TP. Total Percent Completed		TP. N=100%		TP. N=84%	TP. N=72%	TP. N=72%

Table 1 (continued)

Time	't-1'	't-E'	't-2'	't-3'	't-1' 't-2' 't-3'
Dates	Monday April 2, 1973	Monday April 9, 1973	Thursday April 3, 1973	Friday Jan. 18, 1974	
Phase Intervals	0	7 days	31 days (1 month)	260 days (8½ months)	
II. Sexton N=23	O_1	X	O_2	O_3	
Experimental Ss N=13	O_1	N=13	O_2	O_3	
e. Assigned	e. N=13		e. N=13	e. N=13	e. N=13
f. Completed	f. N=13		f. N= 9	f. N= 7	f. N= 7
p. Percent Completed	p. N=100%		p. N=69%	p. N=54%	p. N=54%
Control Ss N=10					
g. Assigned	g. N=10		g. N=10	g. N=10	g. N=10
h. Completed	h. N=10		h. N= 6	h. N= 5	h. N= 3
p. Percent Completed	p. N=100%		p. N=60%	p. N=50%	p. N=30%
T. Total Both Groups	T. N= 23		T. N=15	T. N=12	T. N=10
TP. Total Percent Completed	TP. N=100%		TP. N=66%	TP. N=52%	TP. N=44%

Table 1 (continued)

Time	't-1'	't-E'	't-2'	't-3'	't-1' 't-2' 't-3'
Dates	Tuesday April 24, 1974	Tuesday May 1, 1973	Thursday May 24, 1973	Thursday Jan. 17, 1974	
Phase Intervals	0	7 days	30 days (1 month)	238 days (8 months)	

Confidentiality

The E proceeded by stating his name and why he was doing this type of research. He tried to gain the Ss trust by emphasizing extreme confidentiality and safety by using S aliases.

Since this material was potentially incriminating, Ss were assured that this evaluation was strictly for research purposes. Therefore, Ss did not use their own names. Ss throughout the various test times were instructed to consistently use one 'creative' alias. For those Ss who forgot their aliases, the E informed these Ss to choose their respective aliases from a written list of aliases. This method of insuring anonymity has been successfully demonstrated in drug research using junior college students over a three or four week lapsed interval (Rossi, Groves, and Grafstein, 1971).

Next, the E passed out the questionnaires and scoring pencils. The E explained the demographic questions.

There the E explained each of the 4 questionnaires and gave an example of each one. He then answered any questions that the Ss had.

At Eaton Rapids High School, all of the Ss were tested at the same time in one large group. This same procedure occurred at Sexton High School.

After everyone completed the assessment, the E asked the Ss to turn in their questionnaires, answer sheets, and pencils.

Assignment to Conditions. The E assigned Ss to the experimental and control groups by random assignment controlling for sex and grade. He did this by first dividing the Ss by sex at each grade level. The E counted the Ss and wrote a number on a piece of paper representing each S and folded it up and placed it in a box. Next, the E let each S by sex at each grade level draw a number from the box. All the Ss who drew odd numbers were placed in the control group while all the Ss who drew even numbers were placed in the experimental group.

Post-test Assessment. The two post-test assessments were conducted in the same manner as the pre-test assessment.

Instruments

The purpose of this evaluation was to determine the effectiveness of the S.T.R.I.D.E. drug education program on high school students with regard to the following areas:

(1) Knowledge of Overdose Drug Treatment

(2) Drug Usage

(3) Self-Esteem

(4) Empathy Training

(1) The Drug Overdose Treatment Questionnaire--(OD). In order to test the Ss' knowledge about what to do in emergency situations involving drug overdose, questions were selected from the Overdose Aid (1975) manual. Knowledge about other factors related to overdose aid is also included in both the questionnaire (see Appendix A) and in the manual.

(2) The Drug Usage Questionnaire--The drug usage questionnaire was designed to measure drug usage frequency and severity by determining the amount and type of drug usage the Ss reported.

Because of the social stigma attached to drug usage, two methods were used to measure the amount of drug usage. The first method asked the Ss about their current drug usage, expected drug usage within a year, and expected drug usage in their lifetime. The second method asked the Ss about their friends' drug usage--current usage, expected usage within a year, and expected usage in their lifetime.

Ten different types of drug usage categories comprised the drug usage questionnaire. All of the drugs familiar to the E were placed in one of the following categories:

(1) Self-Usage of Nicotine (SKS)

(2) Friends'-Usage of Nicotine (FSK)

(3) Self-Usage of Marijuana (MSKS)

(4) Friends'-Usage of Marijuanna (MFKS)

(5) Self-Usage of Caffeine (SCF)

(6) Friends'-Usage of Caffeine (FCF)

(7) Self-Usage of Alcohol (SAL)

(8) Friends'-Usage of Alcohol (FAL)

(9) Self-Usage of Dangerous Drugs (SHD)

(10) Friends'-Usage of Dangerous Drugs (SHD)

The dangerous drug variables consisted of glue, methaqualones, amphetamines, tranquilizers, barbiturates--hypnotics, opiates, cocaine, and hallucinogens.

Since for any one drug current usage, expected usage within a year, and expected lifetime usage were highly correlated (Jackson, 1975) only one score was calculated for each of the 10 drug categories (i.e., for any one category the current usage response, expected usage within a year response, and lifetime usage response were added together).

The Ss recorded the severity of their usage by marking each of the ten drug categories on only one of five incremented levels. The levels for the current drug usage variables were: (1) daily; (2) weekly; (3) monthly; (4) less than once a month; and (5) never. For the future drug usage variables, the levels were: (1) definitely will; (2) probably will; (3) don't know; (4) probably will not; and (5) definitely will not.

(3) The Self-Esteem Questionnaire--(SSE) (see Appendix C)--This questionnaire consisted of the first seven inventory scales developed by Rosenberg (1965). These scales explored (1) self-worth; (2) self-stability; (3) faith in people; (4) sensitivity to criticism; (5) depressive affect; (6) daydreaming; and, (7) psychosomatic symptoms. All items were rated on four-point scales. The four-points on most scales were strongly agree, agree, disagree, and strongly disagree. The other scales had similar increments.

(4) The Jackson Empathy Training Questionnaire--(EMT) (EMP) (see Appendix D)--This questionnaire was designed to test the Ss ability to relate to people in the helping relationship.

The reliability (internal consistency) of each measure as determined by Hoyt's (1941) analysis of variance appears in Table 2. These reliabilities were calculated on the pre-test data of the 45 Ss who had completed data.

Most of the reliabilities were in the acceptable to good range (.566 to .960). However, the reliability of variables Overdose Drug Knowledge, Self-Usage of Caffeine, and Empathy Problem Solving were quite low.

The Administrative Agreement

The administrative commitment between the S.T.R.I.D.E. program, the Comprehensive Drug Treatment Programs, and the S.T.R.I.D.E. research director was made in order to insure that all parties were cognizant of their rights and privileges as well as their duties and responsibilities.

The administrative agreement was needed so that none of the respective parties would try to change any of the agreed upon evaluation procedures after the research started. A copy of this agreement appears in Appendix E.

Table 2

The Internal Consistency
of the 14 Assessment Variables

Variables	Reliability (Internal Consistency)
1. Friends-usage of Dangerous Drugs (FHD)	.960
2. Self-Usage of Nicotine (SKS)	.953
3. Self-Usage of Dangerous Drugs (SHD)	.936
4. Self-Usage of Marijuana (MSKS)	.928
5. Self-Usage of Alcohol (SAL)	.897
6. Friends'-Usage of Marijuana (MFKS)	.891
7. Friends'-Usage of Nicotine (FSK)	.881
8. Friends'-Usage of Alcohol (FAL)	.771
9. Summation Self-Esteem	.743
10. Friends'-Usage of Caffeine (FCF)	.676
11. Empathy Technique (EMT)	.566
12. Overdose Drug Knowledge (OD)	.339
13. Self-Usage of Caffeine (SCF)	.264
14. Empathy Problem Solving (EMP)	.048

CHAPTER 3

RESULTS

Attrition

Twenty-seven of the original 72 Ss were lost through attrition. The 27 lost Ss consisted of 14 females (F) and 13 males (M).

To test the effect of attrition as well as the randomization procedure a 2 X 2 X 2 analysis of variance was conducted on age, grade, sex, and 14 dependent variables at the pre-test. The three factors were treatment condition (experimental or control), school (Eaton Rapids or Sexton), and attrition (Yes, No). Therefore, the Eaton Rapids experimental complete data group is denoted (EREI); the Eaton Rapids experimental complete data group is denoted (ERE); the Eaton Rapids control incomplete data group is denoted (ERCI); the Eaton Rapids control complete data group is denoted (ERC); the Sexton experimental incomplete data group is denoted (SEI); the Sexton experimental complete data group is denoted (SE); the Sexton control incomplete data group is denoted (SCI); and the Sexton control complete data group is denoted (SC).

Treatment Effects

The results of the treatment effects show that there were no significant differences between the control Ss versus experimental Ss on any of the pre-treatment variables. Therefore, the randomization procedure was effective (see Appendix F, Table 11).

School Effects

The results of the school effects show that there were initial significant differences between Eaton Rapids and Sexton high schools on the following variables: grade, self-usage of marijuana (MSKS), age, self-usage of dangerous drugs (SHD), friends'-usage of marijuana (MFKS), self-usage of nicotine (SKS), self-usage of caffeine (SCF), self-esteem (SSE), and self-usage of alcohol (SAL) (see Table 3 and Appendix F, Table 12). Since nine out of 14 assessment variables were significant at the ($p < .05$) level on the school effects, it is highly improbable that this finding occurred strictly by chance alone.

The Ss at Sexton High School were significantly older, more advanced in school, used more nicotine (SKS), alcohol (SAL), marijuana (MSKS), dangerous drugs (SHD), and had higher self-esteem scores and more friends that used marijuana than did the Eaton Rapids Ss who used only more caffeine (SCF) than did the Sexton Ss (see Table 4).

Table 3.

Means for the Initial School Effect at Each Level of Treatment and Attrition

Variable		Condition EREI N = 5	ERE N = 11	ERCI N = 9	ERC N = 24	SEI N = 6	SE N = 7	SECI N = 7	SEC N = 3
1.	Grade $\bar{X}$	9.400	9.091	9.667	9.000	10.167	10.714	10.571	10.333
	S.D.	.548	1.044	1.225	.659	.408	.488	.535	.577
2.	MSKS $\bar{X}$	10.600	6.455	8.444	7.042	.667	2.143	2.571	.667
	S.D.	2.191	4.927	3.972	4.038	.817	4.375	3.552	1.155
3.	Age $\bar{X}$	15.400	14.546	15.111	14.500	16.167	16.143	16.286	15.667
	S.D.	.894	1.214	1.269	.780	1.169	.900	.756	.577
4.	SHD $\bar{X}$	89.600	79.727	88.333	83.708	64.500	69.286	80.429	59.667
	S.D.	8.649	15.120	8.972	9.439	17.248	20.147	12.313	27.062
5.	MFKS $\bar{X}$	6.000	3.636	3.222	3.833	1.000	2.143	1.571	.000
	S.D.	4.416	3.443	2.991	3.266	1.265	4.413	2.149	.000
6.	SKS $\bar{X}$	7.600	6.364	7.222	6.958	2.000	4.571	4.429	3.667
	S.D.	3.209	5.045	5.239	4.418	4.000	5.769	4.756	6.351
7.	SCF $\bar{X}$	2.200	3.455	6.000	3.208	6.833	5.286	5.571	5.667
	S.D.	2.683	4.009	3.571	2.536	5.529	5.283	4.315	2.082
8.	SSE $\bar{X}$	95.200	84.455	88.000	79.167	100.333	90.714	86.714	96.333
	S.D.	14.973	24.353	12.135	12.524	12.543	17.192	20.894	13.650
9.	SAL $\bar{X}$	5.400	5.636	6.111	4.500	2.667	3.286	4.429	4.000
	S.D.	3.975	3.107	2.315	2.949	2.658	2.215	3.690	4.359

Table 4.

The Initial School Effects

	Variable	School	
		Eaton Rapids N=35	Sexton N=10
1.	Grade	$\bar{X}$ = 9.280	$\bar{X}$ =10.440
	(F = 43.325, p < .0001)	S.D. = .869	S.D.= .502
2.	MSKS	$\bar{X}$ = 8.130	$\bar{X}$ = 1.511
	(F = 35.540, p < .0001)	S.D. = 3.782	S.D. = 2.475
3.	Age	$\bar{X}$ =14.810	$\bar{X}$ =16.060
	(F = 33.152, p < .0001)	S.D. = 1.039	S.D. = .851
4.	SHD	$\bar{X}$ =85.340	$\bar{X}$ =68.470
	(F = 17.184, p < .0002)	S.D. =10.545	S.D. =19.193
5.	MFKS	$\bar{X}$ = 4.170	$\bar{X}$ = 1.170
	(F = 9.451, p < 0032)	S.D. = 3.529	S.D. = 1.957
6.	SKS	$\bar{X}$ = 7.030	$\bar{X}$ = 3.670
	(F = 7.023, p < .0102)	S.D. = 4.478	S.D. = 5.219
7.	SCF	$\bar{X}$ = 3.710	$\bar{X}$ = 5.830
	(F = 5.273, p < .0250)	S.D. = 3.200	S.D. = 4.302
8.	SSE	$\bar{X}$ =86.700	$\bar{X}$ =93.520
	(F = 4.865, p < .0311)	S.D. =15.996	S.D. =16.047
9.	SAL	$\bar{X}$ = 5.410	$\bar{X}$ = 3.600
	(F = 4.247, p < .0430)	S.D. = 3.087	S.D. = 3.231

Attrition Effects

The results of the attrition effects show that there were significant differences between Ss who completed all of the questionnaires at all three time levels and Ss who failed to complete all of the questionnaires at all three time levels on the following variables. The variables are sex, age, and empathy problem solving (EMP) (see Table 5 and Appendix F, Table 13).

The Ss that completed all of the questionnaires at each of the three time levels were significantly younger, more likely to be male, and scored higher on the empathy problem solving (EMP) variable than did the Ss that did not complete all of the questionnaires at each of the three time levels (see Table 6). Since three out of 14 assessment variables were significant at the ($p < .05$) level on the attrition effects, it is highly improbable that this finding occurred strictly by chance alone.

Treatment X School Interaction Effects

The results of the school X treatment interaction effects show that there were initial significant differences as a function of the school X treatment interaction on the empathy technique (EMT) variable and the friends'-usage of alcohol (FAL) variable (see Table 7 and Appendix F, Table 14).

The Eaton Rapids experimental groups (ERE+I) did worst followed by the Eaton Rapids control groups (ERC+I) followed by the Sexton control groups (SC+I) followed by the Sexton

Table 5.

The Attrition Effect at Each Level of Treatment and School

Variable	EREI N = 5	ERE N = 11	ERCI N = 9	ERC N = 24	SEI N = 6	SE N = 7	SCI N = 7	SC N = 3
1. Sex $\bar{X}$	1.800	1.273	1.333	1.083	1.500	1.286	1.429	1.333
S.D.	.447	.467	.500	.282	.548	.488	.535	.577
2. Age $\bar{X}$	15.400	14.546	15.111	14.500	16.167	16.143	16.286	15.667
S.D.	.894	1.214	1.269	.780	1.169	.900	.756	.577
3. EMP $\bar{X}$	3.000	3.273	2.222	3.000	3.167	4.286	2.143	4.333
S.D.	1.871	1.794	1.641	1.504	1.941	2.059	1.864	1.527

Table 6.

The Attrition Effects

Variable	Ss Data	
	Incomplete N = 27	Complete N = 45
1. Sex ($F = 7.322$, $p < .0088$)	$\bar{X} = 1.515$ S.D. = .507	$\bar{X} = 1.244$ S.D. = 1.244
2. Age ($F = 4.787$, $p < .0324$)	$\bar{X} = 15.741$ S.D. = 1.022	$\bar{X} = 15.214$ S.D. = .868
3. EMP ($F = 4.761$, $p < .0328$)	$\bar{X} = 2.633$ S.D. = 1.829	$\bar{X} = 3.723$ S.D. = 1.721

Table 7.

The Initial Treatment X School Interaction Effects at Each Level of Attrition

Variable	EREI N = 5	ERE N = 11	ERCI N = 9	ERC N = 24	SEI N = 6	SE N = 7	SCI N = 7	SC N = 3
1. EMT $\bar{X}$ =	1.800	3.182	2.556	2.875	3.167	4.286	2.143	4.333
S.D.=	.837	1.168	1.590	1.513	1.033	1.676	1.380	.000
2. FAL $\bar{X}$ =	3.800	3.273	3.000	2.583	1.500	2.143	3.714	2.667
S.D. =	1.924	2.687	2.121	1.863	1.643	2.193	2.059	2.082

experimental groups (SE+I) who did best (see Table 8) on the empathy technique (EMT) variable.

The Sexton experimental groups (SE+I) did worst followed by the Eaton Rapids control groups (ERC+I) followed by the Sexton control groups (SC+I) followed by the Eaton Rapids experimental groups (ERE+I) who did best (see Table 8) on the friends'-usage of alcohol (FAL) variable. Since only two out of 14 assessment variables were significant at the ($p < .05$) level on the treatment X school interaction effects, it is highly probable that this finding occurred strictly by chance alone.

Treatment X Attrition Interaction Effects

The results of the treatment X attrition interaction effects show that there were no initial significant differences between treatments at each level of attrition. Thus, there were no attrition patterns as a function of experimental condition (see Appendix F, Table 15).

School X Attrition Interaction Effects

The results of the school X attrition interaction effects show that there were no initial signigicant differences between Ss as a function of the school X attrition interaction (see Appendix F, Table 16).

Treatment X School X Attrition Interaction Effects

The results of the treatment X school X attrition interaction effects show that there were initial significant

Table 8.

The Initial Treatment X School Interaction Effects

	Variable	ERE+I N = 16	School X Treatment ERC+1 N = 33	SE+1 N = 13	SC+I N = 10
1.	EMT ($F = 6.562$, $p < .013$)	$\bar{X}$ = 2.491 S.D.= 1.002	$\bar{X}$ = 2.715 S.D. = 1.551	$\bar{X}$ = 3.726 S.D. = 1.354	$\bar{X}$ = 3.238 S.D. = .690
2.	FAL ($F = 4.072$, $p < .048$)	$\bar{X}$ = 3.536 S.D.= 2.305	$\bar{X}$ = 2.792 S.D. = 1.992	$\bar{X}$ = 1.821 S D. = 1.918	$\bar{X}$ = 3.191 S.D. = 2.070

differences on only self-usage of dangerous drugs (SHD) variable (see Table 9 and Appendix F, Table 17).

The Sexton control group (SC) used significantly more dangerous drugs (SHD) followed by the Sexton experimental incomplete data group (SEI) followed by the Sexton experimental group (SE) followed by the Eaton Rapids experimental group (ERE) followed by the Eaton Rapids control group (ERC) followed by the Eaton Rapids control incomplete data group (ERCI) followed by the Eaton Rapids experimental incomplete data group (EREI) who used significantly less dangerous drugs. Since only one out of 14 assessment variables were significant at the ($p < .05$) level on the treatment X school X attrition interaction effects, it is highly probable that this finding occurred strictly by chance alone.

Although there were some effects on school, attrition, treatment X school, and treatment X school X attrition, the crucial analyses in determing whether any bias was introduced into the analyses because of attrition involves looking at the treatment effects and the treatment by attrition effects. Since there was no significant differences between groups for any treatment effects or treatment X attrition interaction effects, no bias was introduced into the analysis. However, there may be some loss in the generalizability of these findings due to the attrition since there were significant attrition effects on variables sex, age, empathy technique (EMT), empathy problem solving (EMP), and self-usage of dangerous drugs (SHD).

Table 9.

The Initial Treatment X School Attrition Interaction Effects

Variable	EREI N = 5	ERE N = 11	ERCI N = 9	ERC N = 24	SEI N = 6	SE N = 7	SCI N = 7	SC N = 3
1. SHD $\bar{X}$	89.600	79.727	88.333	83.708	64.500	69.286	80.429	59.667
S.D. ($F = 4.265$, $p < .043$)	8.649	15.120	8.972	9.438	17.248	20.147	13.313	27.062

Therefore, the internal validity of this design is not threatened by attrition since the treatment effects and the treatment X attrition interaction effects were not significant. However, the external validity is threatened somewhat by some attrition effects.

Data Analyses

A 2 X 2 X 3 analysis of variance was conducted on each of the 14 assessment variables. The factors were treatment (experimental-control), school (Sexton-Eaton Rapids), and time (pre-test, post-test, and follow-up test).

Table 10 contains the means on each of the dependent variables for the four groups over the three measuring points.

Treatment Effects

The results indicated significant treatment effects on the empathy technique (EMT), and empathy problem solving (EMP) variables.

The results show that in the analysis of the empathy technique (EMT) variable that the treatment effect was significant at the ($F = 11.771$, $p < .01$) level (see Appendix G, Table 18). The experimental Ss did significantly better ($\bar{X} = 4.093$, S.D. = 1.492) on the variable empathy technique (EMT) than did the control Ss ($\bar{X} = 2.901$, S.D. = 1.375). (All means represent the means of the treatment effects ignoring both the school and time effects.)

Table 10.

The Means and Standard Deviations of the 14 Assessment Variables at the Three Time Levels

Variable		Time	Experimental		Control	
			Eaton Rapids N = 11	Sexton N = 7	Eaton Rapids N = 24	Sexton N = 3
1.	EMT1	$\bar{X}_1$	3.182	3.857	2.875	2.000
		S.D.$_1$	1.168	1.676	1.513	.000
	EMT2	$\bar{X}_2$	4.546	3.714	2.875	1.333
		S.D.$_2$	1.508	1.799	1.541	1.155
	EMT3	$\bar{X}_3$	4.455	4.857	3.000	5.000
		S.D.$_3$	1.864	.900	1.319	1.000
2.	EMP1	$\bar{X}_1$	3.273	4.286	3.000	4.333
		S.D.$_1$	1.794	2.059	1.504	1.528
	EMP2	$\bar{X}_2$	5.091	4.571	3.000	4.667
		S.D.$_2$	1.300	2.149	1.063	2.082
	EMP3	$\bar{X}_3$	4.455	5.714	3.792	5.000
		S.D.$_3$	1.635	.756	1.587	1.000
3.	OD1	$\bar{X}_1$	10.000	12.143	10.542	13.667
		S.D.$_1$	3.286	4.706	3.203	.577
	OD2	$\bar{X}_2$	11.364	15.571	11.042	12.333
		S.D.$_2$	2.730	4.276	3.155	4.509
	OD3	$\bar{X}_3$	10.636	15.143	11.458	12.333
		S.D.$_3$	3.295	4.100	2.670	.577
4.	MSKS1	$\bar{X}_1$	6.455	2.143	7.042	.667
		S.D.$_1$	4.927	4.375	4.038	1.155
	MSKS2	$\bar{X}_2$	6.182	2.857	7.833	.667
		S.D.$_2$	4.094	4.375	3.908	1.155
	MSKS3	$\bar{X}_3$	5.909	2.571	5.917	5.000
		S.D.$_3$	5.186	4.237	4.605	1.000

Table 10. (continued)

Variable		Time	Experimental		Control	
			Eaton Rapids N - 11	Sexton N = 7	Eaton Rapids N = 24	Sexton N = 3
5.	SHD1	$\bar{X}_1$	79.727	69.286	83.708	59.667
		$S.D._1$	15.120	20.147	9.438	27.062
	SHD2	$\bar{X}_2$	82.182	68.000	83.417	64.000
		$S.D._2$	13.761	19.816	10.607	25.239
	SHD3	$\bar{X}_3$	82.727	75.857	80.875	92.000
		$S.D._3$	21.124	13.310	13.215	4.583
6.	SAL1	$\bar{X}_1$	5.636	3.286	4.500	4.000
		$S.D._1$	3.107	2.215	2.949	4.359
	SAL2	$\bar{X}_2$	6.182	2.429	4.458	3.667
		$S.D._2$	3.401	2.370	2.963	4.619
	SAL3	$\bar{X}_3$	5.182	2.429	3.917	2.000
		$S.D._3$	4.143	2.149	2.653	1.000
7.	FHD1	$\bar{X}_1$	65.091	57.000	64.125	48.667
		$S.D._1$	18.448	30.822	15.318	25.813
	FHD2	$\bar{X}_2$	63.546	58.143	63.583	51.000
		$S.D._2$	16.884	26.264	11.632	24.249
	FHD3	$\bar{X}_3$	55.909	64.857	64.042	76.000
		$S.D._3$	26.440	19.962	17.297	23.580
8.	SSE1	$\bar{X}_1$	84.455	90.714	79.167	96.333
		$S.D._1$	24.353	17.192	12.524	13.650
	SSE2	$\bar{X}_2$	88.000	91.143	83.833	103.000
		$S.D._2$	24.932	14.416	16.557	14.799
	SSE3	$\bar{X}_3$	79.000	87.429	81.792	97.000
		$S.D._3$	26.351	17.415	14.271	25.239
9.	SKS1	$\bar{X}_1$	6.364	4.571	6.958	3.667
		$S.D._1$	5.045	5.769	4.418	6.351
	SKS2	$\bar{X}_2$	6.455	3.857	6.833	3.667
		$S.D._2$	4.906	4.413	4.488	4.726
	SKS3	$\bar{X}_3$	6.182	3.714	6.500	4.333
		$S.D._3$	4.600	5.707	4.917	4.509

Table 10. (continued)

	Variable	Time	Experimental		Control	
			Eaton Rapids N = 11	Sexton N = 7	Eaton Rapids N = 24	Sexton N = 3
10.	SCF1	$\bar{X}_1$	3.455	5.286	3.208	5.667
		S.D.$_1$	4.009	5.283	2.536	2.082
	SCF2	$\bar{X}_2$	4.273	4.429	3.875	4.333
		S.D.$_2$	4.407	3.409	3.353	1.528
	SCF3	$\bar{X}_3$	4.636	2.857	3.167	5.000
		S.D.$_3$	4.884	4.298	3.031	2.000
11.	FSK1	$\bar{X}_1$	2.273	2.571	2.208	.333
		S.D.$_1$	3.409	4.429	2.467	.577
	FSK2	$\bar{X}_2$	2.273	3.000	2.333	.333
		S.D.$_2$	3.952	4.690	2.565	.577
	FSK3	$\bar{X}_3$	2.455	2.429	2.042	.000
		S.D.$_3$	3.857	3.823	2.956	.000
12.	MFKS1	$\bar{X}_1$	3.636	2.143	3.833	.000
		S.D.$_1$	3.443	4.413	3.266	.000
	MFKS2	$\bar{X}_2$	2.000	2.429	3.667	.000
		S.D.$_2$	3.464	4.467	3.397	.000
	MFKS3	$\bar{X}_3$	3.182	2.000	3.250	1.000
		S.D.$_3$	4.423	4.435	3.274	1.000
13.	FCF1	$\bar{X}_1$	3.636	2.429	3.500	3.667
		S.D.$_1$	2.203	3.599	2.432	1.155
	FCF2	$\bar{X}_2$	3.546	2.714	2.875	2.667
		S.D.$_2$	3.560	2.752	2.028	2.082
	FCF3	$\bar{X}_3$	3.182	1.286	2.458	.667
		S.D.$_3$	2.857	1.890	2.340	.577
14.	FAL1	$\bar{X}_1$	3.273	2.143	2.583	2.667
		S.D.$_1$	2.687	2.193	1.863	2.082
	FAL2	$\bar{X}_2$	3.273	2.571	2.917	2.333
		S.D.$_2$	2.867	3.101	1.909	2.309
	FAL3	$\bar{X}_3$	2.546	1.714	2.667	1.333
		S.D.$_3$	2.583	2.498	2.220	.577

Table 10. (continued)

	Variable	Time	Experimental		Control	
			Eaton Rapids N = 11	Sexton N = 7	Eaton Rapids N = 24	Sexton N = 3
15.	Drug-Total Score1	$\bar{X}_1$	17.955	15.086	18.167	12.900
		S.D.$_1$	6.240	8.325	4.873	7.064
	Drug-Total Score2	$\bar{X}_2$	17.991	15.043	18.179	13.267
		S.D.$_2$	6.130	7.566	4.685	6.648
	Drug-Total Score3	$\bar{X}_3$	17.191	15.971	17.484	18.633
		S.D.$_3$	8.010	6.231	5.651	3.883
16.	Empathy1	$\bar{X}_1$	3.228	4.072	2.938	3.167
		S.D.$_1$	1.481	1.866	1.509	.764
	Empathy2	$\bar{X}_2$	4.819	4.143	2.938	3.000
		S.D.$_2$	1.404	1.974	1.302	1.619
	Empathy3	$\bar{X}_3$	4.455	5.286	3.396	5.000
		S.D.$_3$	1.750	1.480	1.453	1.000

The results show that in the analysis of the empathy problem solving (EMP) variable that the treatment effect was significant at the ($F = 9.504$, $p < .01$) level (see Appendix G, Table 18). The experimental Ss did significantly better ($\bar{X} = 4.500$, S.D. = 1.607) on the variable empathy problem solving (EMP) than did the control Ss ($\bar{X} = 3.420$, S.D. = 1.402).

Since the empathy technique and the empathy problem solving variables are correlated, the above F tests are not truly independent. Therefore, the author also performed an F test on the combined empathy score. Since this test was statistically significant ($F = 14.852$, $p < .01$) level (see Appendix G. Table 18), the author concluded that the superiority of the S.T.R.I.D.E. treatment groups on the total empathy score was a real significant difference.

School Effects

The results indicated significant school effects on the following five variables: overdose drug knowledge (OD), self-usage of marijuana (MSKS), self-usage of dangerous drugs (SHD), self-usage of alcohol (SAL), and empathy problem solving (EMP).

The results show that in the analysis of the overdose drug knowledge (OD) variable that the school effect was significant at the ($F = 8.345$, $p < .01$) level (see Appendix G, Table 19). The Sexton High School Ss reported significantly more self-usage of marijuana (MSKS) ($\bar{X} = 2.267$, S.D. = 3.361) than did the Eaton Rapids Ss ($\bar{X} = 6.695$, S.D. = 3.613).

The results show that in the analysis of the self-usage of dangerous drugs (SHD) variable that the school effect was singnificant at the ($F = 5.091$, $p < .05$) level (see Appendix G, Table 19). The Sexton High School Ss reported significantly more self-usage of dangerous drugs (SHD) ($\bar{X} = 71.300$, S.D. = 18.116) than did the Eaton Rapids Ss ($\bar{X} = 82.314$, S.D. = 12.807).

The results show that in the analysis of the self-usage of alcohol (SAL) variable that the school effect was significant at the ($F = 5.070$, $p < .05$) level (see Appendix G, Table 19). The Sexton High School Ss reported significantly more self-usage of alcohol (SAL) ($\bar{X} = 2.867$, S.D. = 2.569) than did the Eaton Rapids Ss ($\bar{X} = 4.724$, S.D. = 3.118).

Since there were several drug usage variables, the above F tests are not truly independent. Therefore the author also performed an F test on the combined drug usage score. Since this test was not statistically significant ($F = 2.573$, $p < .05$) level (see Appendix G, Table 19), the author concluded that the school effect on the total drug usage score was a non-significant difference.

The results show that in the analysis of the empathy problem solving (EMP) variable that the school effect was significant at the ($F = 4.229$, $p < .05$) level (see Appendix G, Table 19). The Sexton High School Ss did significantly better ($\bar{X} = 4.800$, S.D. = 1.619) on the variable empathy problem solving (EMP) than did the Eaton Rapids Ss ($\bar{X} = 3.581$, S.D. = 1.545).

Since the empathy technique and the empathy problem solving variables are correlated, the above F tests are not truly independent. Therefore, the author also performed an F test on the combined empathy score. Since this test was not statistically significant ($F = 1.486$, $p < .05$) level (see Appendix G, Table 19), the author concluded that the school effect on the total empathy score was a non-significant difference.

There were no other significant effects on the other nine dependent variables.

Time Effects

The results indicated significant time effects on the empathy problem solving (EMP), and empathy technique (EMT) variables.

The results show that in the analysis of the empathy problem solving (EMP) variable that the time effect was significant at the ($F = 7.319$, $p < .01$) level (see Appendix G, Table 30). All Ss scored significantly higher on the empathy problem solving (EMP) variable at Time-2 ($\bar{X} = 4.332$, S.D. = 1.649) and at Time-3 ($\bar{X} = 4.740$, S.D. = 1.245) than they did at Time-1 ($\bar{X} = 3.723$, S.D. = 1.721). (All means represent the means of the time effects ignoring both the treatment and school effects.)

The results show that in the analysis of the empathy technique (EMT) variable that the time effect was significant at the ($F = 4.885$, $p < .05$) level (see Appendix G, Table 20). All Ss scored significantly higher on the

empathy technique (EMT) variable at Time-3 ($\bar{X}$ 4.179, S.D. = 1.208) than they did at Time-1 ($\bar{X}$ = 3.136, S.D. = 1.289) and at Time-2 ($\bar{X}$ = 3.200, S.D. = 1.565).

Since the empathy technique and the empathy problem solving variables are correlated, the above F tests are not truly independent. Therefore, the author also performed an F test on the combined empathy score. Since this test was statistically significant ($F = 9.940$, $p < .05$) level (see Appendix G, Table 20), the author concluded that the time effect on the total empathy score was a real significant difference.

There were no other significant time effects on the other 12 dependent variables.

Treatment X School Interaction Effects

The results of the school X treatment interaction effects show that there were no significant differences as a function of the school X treatment interaction on any of the 14 variables (see Appendix G, Table 21).

Treatment X Time Interaction Effects

The results of the treatment X time interaction effects show that there were no significant differences between treatments at each level of time. Thus, there were no time patterns as a function of experimental condition on any of the 14 variables (see Appendix G, Table 22).

School X Time Interaction Effects

The results indicated significant school X time interaction effects on the following four variables: self-usage of dangerous drugs (SHD), friends'-usage of dangerous drugs (FHD), empathy technique (EMT), and self-usage of marijuana (MSKS).

The results show that in the analysis of the self-usage of dangerous drugs (SHD) variable that the school X time interaction effect was significant at the ($F = 6.861$, $p < .05$) level (see Appendix G, Table 23). While there was not much change in the use of dangerous drugs by Eaton Rapids Ss over time, there was a tendency for Ss at Sexton to decrease their usage of dangerous drugs over time.

The results show that in the analysis of the friends'-usage of dangerous drugs (FHD) variable that the school X time interaction effect was significant at the ($F = 6.308$, $p < .05$) level (see Appendix G, Table 23). While Eaton Rapids Ss' scores on friends'-usage of dangerous drugs increased slightly over time, Sexton Ss' scores on friends'-usage of dangerous drugs decreased somewhat over time.

The results show that in the analysis of the self-usage of marijuana (MSKS) variable that the school X time interaction effect was significant at the ($F = 5.135$, $p < .05$) level (see Appendix G, Table 23). While Ss at Eaton Rapids slightly increased their usage of marijuana over time, the Ss at Sexton decreased somewhat their usage of marijuana over time.

Since there were several drug usages variables, the above F tests are not truly independent. Therefore, the author also performed an F test on the combined drug usage score. Since this test was statistically significant ($F = 5.482$, $p < .05$) level (see Appendix G, Table 23) the author concluded that the school X time interaction effect on the total drug usage score was a real significant difference.

The results show that in the analysis of the empathy technique (EMT) variable that the school X time interaction effect was significant at the ($F = 6.182$, $p < .05$) level (see Appendix G, Table 23). While Ss at Eaton Rapids slightly increased their empathy technique scores over time, the Sexton Ss exhibited a curvilinear pattern where the Time-2 empathy technique scores were lower than empathy technique scores at Time-1 and at Time-3.

Since the empathy technique and the empathy problem solving variables are correlated, the above F tests are not truly independent. Therefore, the author also performed an F test on the combined empathy score. Since this test was not statistically significant ($F = .499$, $p < .05$) level (see Appendix G, Table 23) the author concluded that the school X time interaction effect on the total empathy score was a non-significant difference.

There were no other significant school X time interaction effects on the other 10 dependent variables.

Treatment X School X Time Interaction Effects

The results indicated significant treatment X school X time interaction effects on the self-usage of marijuana (MSKS) and the self-usage of dangerous drugs (SHD) variables.

The results show that in the analysis of the self-usage of marijuana (MSKS) variable that the treatment X school X time interaction effect was significant at the ($F = 5.802$, $p < .05$) level (see Appendix G, Table 24). While Eaton Rapids Ss' scores on marijuana usage slightly increased over time, Sexton control Ss' scores greatly decreased, and Sexton experimental Ss' showed lowest marijuana usage at Time-2 than at Times 1 and 3.

The results show that in the analysis of the self-usage of dangerous drugs (SHD) variable that the treatment X school X time interaction effect was significant at the ($F = 5.113$, $p < .05$) level (see Appendix G, Table 24). While Eaton Rapids experimental Ss' scores on self-usage of dangerous drugs slightly decreased over time, Sexton experimental Ss' scores decreased somewhat, Sexton control Ss' scores decreased substantially, and Eaton Rapids control Ss' scores slightly increased.

Since there were several drug usage variables, the above F tests are not truly independent. Therefore, the author also performed an F test on the combined drug usage score. Since this test was not statistically significant ($F = 2.337$, $p < .05$) level (see Appendix G, Table 24), the author

concluded that the treatment X school X time interaction effect on the total drug usage score was a non-significant difference.

There were no other significant treatment X school X time interaction effects on the other 12 dependent variables.

CHAPTER 4

DISCUSSION

The lack of a significant treatment effect on any part of the pre-test or demographic variables indicates the randomization procedure was effective. Although 27 Ss were lost due to attrition, the lack of any significant treatment X attrition interaction effects suggests that the attrition did not negate the effectiveness of the randomization procedure. However, the presence of significant main effects due to attrition may restrict the generalizability of these findings.

School Effects

Although the main effects of school and interactions involving the school effect are not interesting theoretically, they should be mentioned briefly. Sexton Ss scored significantly higher on several drug usage variables, but also showed a tendency to show greater decreases in these same variables over time than did Eaton Rapids Ss.

Time Effects

The main effect of time on the empathy problem solving variable may be partially explained by a social development

process whereby the Ss are becoming more socially mature and sensitive as they grow older.

Treatment Effects

Empathy. There were significant treatment effects on the empathy technique (EMT) and the empathy problem solving (EMP) variables. There were no significant treatment effects on any of the other variables. The amount of workshop time devoted to empathy training as compared to time spent on other activities may at least partially explain why the S.T.R.I.D.E. Program produced significant effects on the empathy variable but not on the other variables. Two out of the six S.T.R.I.D.E. workshop days were devoted to empathy skills. Another day and a half was devoted to the development of the related skills of values clarification and problem solving. Two days were devoted to overdose drug knowledge aid while there was no specific time allotted to techniques for reducing drug usage or for increasing self-esteem.

Thus, perhaps the S.T.R.I.D.E. workshop achieved its objective in training people to become more empathic because nearly twice a much time was allocated to empathy training as compared to any other training component.

Overdose Drug Knowledge

There was no treatment effect on the overdose drug knowledge (OD) variable. Two out of the six S.T.R.I.D.E. workshop days were devoted to overdose drug knowledge and

still no improvement was found in the experimental Ss. The reason for this failure is due primarily because overdose drug knowledge simply cannot be learned in two days. There are hundreds of drugs, and many overdose aid procedures. Drugs taken alone or in combination with other drugs or substances affect victims differently. Factors such as how much was consumed, how long ago it was consumed, what was its true generic compostion, was the victim a new or veteran user of drugs especially the culprit drug, and what was the victim's drug tolerance level are extremely important issues in treating drug victims. And, in spite of the fact that the Ss were given an opportunity to practice what they had learned in the lecture section on overdose drug aid by treating trainees, who role-played as emergency clients, and were given feedback from instructors and peers on their newly acquired skills, still there was no improvement in the overdose drug aid scores.

However, it is important to note that failure to increase drug knowledge may not be detrimental to a program whose primary goal is to reduce drug usage. Research by Stuart and Schuman (1972) found that non-users of every drug were less knowledgeable about drugs than users. In addition, they found drug education programs not only failed to reduce drug taking behavior, but in fact, may have increased drug usage (see also: Swisher, Crawford, Goldstein, and Yura, 1971).

While stuart and Schuman (1972) study had methodological short-comings, they do suggest that the failure of the present program to increase drug knowledge may not be disastrous with respect to reducing drug usage.

Drug Usage

There were no significant treatment effects on the drug usage variables. Since there was no specific time allocated for advocating a reduction in drug usage in the S.T.R.I.D.E. workshop, it is not surprising that the Ss' drug usage and their friends' drug usage were not decreased by the S.T.R.I.D.E. workshop training. However, many of the Ss especially at the Eaton Rapids schools consumed a minimum of dangerous drugs so that a decrease in drug usage would be difficult to detect since initial low drug usage resulted in a basement effect.

Although his research had some methodological flaws, Richard B. Stuart (1974) supports these findings in his study of drug usage in drug education programs. He found that neither format nor content factors influence the results of the program. Relative to controls, Ss receiving drug education significantly increased their use and sale of marijuana and L.S.D. and their use of alcohol while showing a significant increase in drug information and a decrease in worry about drugs. When the interaction between drug usage, knowledge, and worry was examined it was shown that usage tends to rise as a function of a combination of high knowledge and low worry but not as a function of

increases in one without the other. It is, therefore, suggested that drug education efforts may have iatrogenic effects, and it is strongly recommended that all such programs assess their consequences at least in terms of Ss' drug usage.

Similarly, Halleck (1970) and Swisher, Crawford, Goldstein, and Yura (1971) found that much of what goes on in the name of drug education may actually be "pushing" rather than preventing.

Jaffee and Clark (1972) and Macro Systems, Inc. (1972) found that the scant evidence that does exist suggests that with few exceptions most drug abuse prevention programs have negative, or at best, null effects.

This is probably because drug usage among adolescents is a highly social activity more subject to influence by peer and family relationships than by formal classroom education (Blum, 1972).

Seabright (1973) found in her review of a number of drug abuse prevention programs that there is unanimous agreement among drug education specialists that the one-shot, "crash" program is ineffective.

Recent reports from the National Commission on Marijuana and Drug Abuse (1972) confirm the need for implementation of programs which do more than provide information about drugs. If the problem is, as the commission suggests, a problem of human behavior, then programs should be

introduced which educate toward the goal of more effective decision making in a variety of situations.

Although drug education efforts have not been effective in reducing drug usage behavior, other techniques which are more firmly rooted in social psychological theories of attitude change have produced some positive effects.

Fear arousal is one technique which has produced interesting results. For example, at least six studies by Higbee (1969) have shown that high fear appeals are superior to low fear appeals in creating persuasion about cigarette smoking behavior.

However, other research indicates that high fear appeals may not be as effective as low fear appeals if the Ss have prior experience or knowledge about drugs. For example, with respect to marijuana cigarette smoking Smart and Fejer (1974) found that low fear messages were more successful than either high or medium fear messages in persuading marijuana users to discontinue useage. However, for non-marijuana users there was a curvilinear relationship, with the medium fear messages being the least successful. However, these results should be accepted with some caution, since they reached significance only at $p < .10 > .05$.

Smart and Fejer (1974) also demonstrated the superiority of high fear messages over low fear messages in situations where drug knowledge was low. They found high threat messages produced greater reluctance to try a "non-existent" drug than did low threat messages.

The above findings clearly underscore the importance of knowing the audience before designing an intervention program aimed at reducing drug usage. If the audience is primarily drug users, it is highly unlikely that a one-sided high threat message will be effective. On the other hand with an inexperienced audience, the high fear arousal condition may be more effective than the low fear arousal. Personality traits such as anxiety also mediate the effectiveness of the various fear messages. For example, Smart and Fejer found that the medium fear message had less effect on the intent to use marijuana for the medium anxiety group, while with high anxious Ss, no evidence was found that high fear messages were less effective than low or medium fear messages.

In conclusion, the authors suggest that persons interested in designing programs aimed at drug education consult the attitude change literature first. The interaction of audience characteristics with variables such as source credibility, logical or emotional appeals, primary and recency effects, have potential relevance to designing such programs. However, the authors' recommendations was to be tempered somewhat by the harsh reality that attitude change does not always correlate with behavior change (Wicker, 1969).

Self-Esteem

There was no treatment effect on the self-esteem (SSE) variable. Since there was no specific time allotted for

self-esteem in the S.T.R.I.D.E. workshop, the failure of the S.T.R.I.D.E. program to increase self-esteem is not surprising.

Nevertheless, it does seem important at this point to remind the reader that several studies (Samuels, 1974; Poe, Boynton, and Allman, 1972) have demonstrated that drug taking behavior is related to low self-concept. Given this reminder several program suggestions for incresing the self-esteem of adolescents are provided in the following paragraphs.

Kane (1973), Piorkowski (1973), and Myers (1973) all argue that the primary function of drug programs should be development of the individual to one's fullest potential. Therefore, they urge that considerable time be spent dealing with the students' fears, wishes, and other feelings.

Other researchers have recognized this need. Dohner (1973) suggests one non-chemical alternative is through "personal awareness development" whereby people develop their own feelings, attitudes, and perceptions in order to evaluate the effect of their behavior on others.

And Samuels (1973) believes that for a drug education program to be effective that it must stress the individual's own intrinsic values and attitudes interwoven in the whole syndrome of drug use, abuse, and addiction. He cited the Dale County Schools whose focus is on affective rather than cognitive levels of development. They seek to develop the inter-intra personal skills, coping skills, and the

improvement of self-concept for their students. The schools provide opportunities for the growth and development of self-concept, self-worth, and interpersonal relationships which have been found to be an underlying aspect in one's involvement in the abuse of drugs as well as in any other deviant aspect of behavior. The focus of elementary students is on awareness of feelings, mastery of those feelings and social interaction. The focus of secondary students is on peer counseling and/or teen counseling programs where counselors are trained in active listening skills, value clarification techniques and problem solving and decision-making skills which are of importance to themselves as well as those that they counsel. Therefore, the activity segment of the program relies on offering activities through which young people can achieve goals of socialization, sensory experience, and emotional growth which are in and of themselves one of growth, but also can act as alternative activities to drug abuse involvement. However, it should be noted that the efficacy of this program is still undetermined, and more research needs to be done.

In summary, the concensus of may programs is that the drug users need worthwhile alternative activities to alleviate some of their boredom and to channel their curiosity. If they kept busy through after-school programs, community centers, special courses, (i.e., transcendental meditation, Yoga, music), then they would have less time and need for drugs. These types of worthwhile activities would probably

bolster their self-concept and increase their self-esteem. Therefore, since students spend a significant amount of time in school, the school system must develop educational programs that will help students cope with life and form sound values and attitudes about drugs and life in general. Students should also learn to recognize and be able to deal with their feelings in a constructive manner.

The S.T.R.I.D.E. program attempts to do this with its empathy workshop. However, providing an ongoing after-school program of alternatives was beyond the scope of its resources. Again, it is important to point out that the author is not aware of any empirical research demonstrating the effectiveness of such approaches in increasing self-esteem and/or decreasing drug usage.

Conclusion

In summary, the S.T.R.I.D.E. program was very effective in increasing the empathy skills of the workshop participants. However, the S.T.R.I.D.E. program was not effective in increasing overdose knowledge and self-esteem of the participants. Nor did the S.T.R.I.D.E. program have any significant effect on the drug usage patterns of its participants.

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APPENDICES

APPENDIX A

APPENDIX A

1. Group

    1. Experimental
    2. Control
    3. Non-volunteer
    4.
    5.

2. Test time

    1. t-1
    2. t-3
    3. t-4
    4. t-5

3. School

    1. Eaton Rapids
    2. Harry Hill
    3. Sexton
    4.
    5.

4. Sex

    1. Female
    2. Male

5. Rank

    1. 7th grade
    2. 8th grade
    3. 9th grade
    4. 10th grade
    5. 11th grade

6. Age (See question number 7 also)

    1. 11
    2. 12
    3. 13
    4. 14
    5. 15

7. Age (Continued)

    1. 16
    2. 17
    3. 18
    4. 19
    5. 20

8. Race

    1. White
    2. Black
    3. Chicano
    4. Oriental
    5. Other

INTRODUCTION

TO

THE DRUG OVERDOSE TREATMENT QUESTIONNAIRE

Since part of the S.T.R.I.D.E. drug education program is designed to instruct trainees in administering drug overdose aid in emergency situations, you will be asked about your knowledge of drugs and their effects on users.

Overdose Treatment Questionnaire

9. Treatment for brain damage victims involves

   a. Keeping the victim warm and lying down with his head elevated
   b. giving the victim liquids
   c. taking convulsion precautions, and moving with great care
   d. A and C
   e. A, B, and C

10. In the treatment of blood clots, one should

   a. elevate the body part and apply pressure to keep the clot from moving
   b. the vein can be ligated where serious danger of clot moving occurs
   c. apply ice to hurry healing and keep up treatment until clot has scarred into place
   d. A and B
   e. A, B, and C

11. Which is not a hallucinogen that mixes up the brain's chemical signals?

   a. LSD
   b. STP
   c. Glue
   d. Marijuana
   e. C and D

12. If one suffers from sedative confusion, he does not

   a. appear drunk
   b. close his memory
   c. regress in behavior (act much younger)
   d. vigorously move or run around the area
   e. stop breathing

13. What type of blood poisoning carries surface germs throughout the body due to improper injection techniques?

   a. hepatitus
   b. abscess
   c. sterile abscess
   d. septicemia
   e. none of the above

14. Which of the following statement(s) is (are) true?

a. Infected blood clots cause heart attacks.
b. Uninfected blood clots cause heart attacks.
c. Uninfected blood clots cause strokes.
d. A and C
e. B and C

15. In opium confusion, the subject is rarely

a. laughing or overly happy
b. careless
c. hurt without any warning pain
d. sleepy
e. violent or dangerous

16. In the treatment for opium confusion, do not

a. try to keep subject quiet
b. give stimulants such as coffee, tea, or tobacco
c. give a sedative
d. give alcohol
e. C and D

17. A shock victim does not have

a. a cold sweat
b. a weak pulse
c. a rapid pulse
d. low blood pressure
e. high blood pressure

18. In opiate overdose, the victim does not

a. fall into a deep sleep
b. have pinpointed pupils
c. have pupils that will not change in light
d. have a slow pulse
e. breath very slowly

19. Anesthesia may be caused by

a. alcohol
b. barbiturates
c. heroin
d. B and C
e. all of the above

20. Which of the following is not a myth about alcohol?

a. alcohol is a stimulant
b. a little drinking doesn't affect one's driving
c. a drink or two will improve one's skill
d. alcohol warms the body
e. there are not any quick methods for sobering up

21. Which of the following is not a myth about alcohol?

    a. alcohol acts as an aphrodisiac and increases sexual prowess
    b. alcohol does not affect adults and teen-agers alike
    c. eating can prevent drunkenness
    d. mixing drinks causes drunkenness
    e. drunks belong in jail

22. Which of the following is a myth about alcohol?

    a. once the alcoholic becomes sensitive or addicted to alcohol, he does not have to remain addicted throughout life
    b. approximately one out of fifteen drinkers become alcoholics
    c. the length of time it may take for the disease to develop varies considerably from person to person
    d. denying alcoholism is as much a part of the disease as drinking
    e. alcohol alone does not cause alcoholism

23. Which of the following diseases can be transmitted through dried blood from dirty injection equipment?

    a. malaria
    b. syphillis
    c. serum hepatitus
    d. A and C
    e. all of the above

24. The fastest drug that can stop breathing is

    a. Freon
    b. Glue
    c. Heroin
    d. Barbiturates
    e. Alcohol

25. Cardiac massage should not be considered when

    a. the victim has stopped breathing
    b. no pulse is found in wrist, neck, or groin
    c. no sound can be heard with the ear directly over the heart
    d. pupils are pinpointed
    e. pupils are dilated

26. In cases of overdose by mouth, there is no need to

    a. find out what drug it is
    b. determine whether the drug was in liquid, solid, pill, or capsule form
    c. induce vomiting if stimulants are involved

d. induce vomiting if barbiturates are involved
e. dilute the drug with water

27. Symptoms of brain hemorrhage can be all of the following except

a. unequal pupils
b. slow breathing
c. unequal reflexes
d. paralyzed limbs
e. abnormal reflexes

28. In the treatment of stroke-like complications, the helper should not

a. treat for shock
b. consider alcohol sedation
c. move to a hospital as soon as possible
d. give artificial respiration if necessary
e. watch for convulsions

29. Treatment of sedative overdose does not require

a. treatment for shock
b. monitoring of life signs
c. keeping subject awake
d. artificial respiration if necessary
e. hospital care as soon as possible

30. Which of the following is not true of severe opium overdose?

a. the victim has a difficult time trying to fall back to sleep
b. breathing decreases
c. heart action decreases
d. death can come rapidly and without warning
e. pupils are pinpointed

31. In severe opiate overdose, the helper should not

a. let the victim sleep it off
b. monitor life signs
c. keep subject stimulated if "on the nod"
d. use caffeine and nicotine
e. apply artificial respiration if necessary

32. Which of the following does not cause any serious body dependency?

a. codeine
b. tranquilizers
c. barbiturates
d. LSD
e. amphetamines

33. Crashing from amphetamines causes

    a. the victim to feel very tired
    b. a hopeless mental attitude
    c. serious changes in blood pressure
    d. a slow pulse
    e. all of the above

34. Which of the following cannot as a rule cause convulsions?

    a. LSD
    b. benzedrine
    c. amphetamines
    d. strychnine
    e. mescaline

35. Which of the following is most likely to cause convulsions?

    a. strychnine
    b. psilocybin
    c. marijuana
    d. THC
    e. opiates

36. The unconscious state of hyperventilation is not accompanied by

    a. collapsed lungs
    b. muscle shakes
    c. signs much like nerve damage due to the chemical changes in the blood
    d. headaches
    e. a sensation of not being able to get a deep breath

37. In transporting overdose victims to a treatment facility, the trained helper should not

    a. tell the subject what you are going to do
    b. use conventional cars where possible
    c. use ambulances, medical paraphenalia, sirens if at all possible
    d. transport subjects in rear seat of the vehicle
    e. have people with the subject in the rear seat

38. Convulsion treatment should not include

    a. using an object to prevent the mouth from closing, that will not damage the teeth
    b. tilting the head so that the throat will empty
    c. restricting movement of limbs to prevent injury
    d. using stimulants as a reliable anticonvulsant for conscious victims
    e. all of the above

APPENDIX B

APPENDIX B

INTRODUCTION

TO

THE DRUG USAGE QUESTIONNAIRE

As you know there is considerable concern about drug usage among all segments of the population including high school students; we want to find out what kind of drug usage your school has. Remember that we need honest answers and by using your aliases, you have strict confidentiality. We would like to know about your own personal usage of drugs, and the drug habits of your friends. We know that some of you have not tried drugs yet, but you may want to use drugs in the future.

Drug Usage Questionnaire

Please indicate below how frequently you currently use the following drugs.

	DRUGS	1 DAILY	2 WEEKLY	3 MONTHLY	4 LESS THAN ONCE A MONTH	5 NEVER
39.	GLUE					
40.	AMPHETAMINES diet pills, speed, (uppers)					
41.	ALCOHOL					
42.	NICOTINE cigarettes, cigars, pipes					
43.	BARBITURATES HYPNOTICS (Downers except Methaqualones)					
44.	METHAQUALONES					
45.	TRANQUILIZERS					
46.	OPIATES heroin, morphine					
47.	COCAINE					
48.	CAFFEINE coffee, tea					
49.	HALLUCINOGENS (LSD, STP, PCP) mescaline					
50.	MARIJUANA					

Drug Usage Questionnaire

Please indicate below how frequently your friends currently use the following drugs.

	DRUGS	1 DAILY	2 WEEKLY	3 MONTHLY	4 LESS THAN ONCE A MONTH	5 NEVER
51.	GLUE					
52.	AMPHETAMINES diet pills, speed, (uppers)					
53.	ALCOHOL					
54.	NICOTINE cigarettes, cigars, pipes					
55.	BARBITURATES HYPNOTICS (Downers except Methaqualones)					
56.	METHAQUALONES					
57.	TRANQUILIZERS					
58.	OPIATES heroin, morphine					
59.	COCAINE					
60.	CAFFEINE coffee, tea					
61.	HALLUCINOGENS (LSD, STP, PCP) mescaline					
62.	MARIJUANA					

Drug Usage Questionnaire

Please indicate how likely it is that you will use the following drugs in the next year.

	DRUGS	1 DEFINITELY WILL	2 PROBABLY WILL	3 DON'T KNOW	4 PROBABLY WILL NOT	5 DEFINITELY WILL NOT
63.	GLUE					
64.	AMPHETAMINES diet pills, speed, (uppers)					
65.	ALCOHOL					
66.	NICOTINE cigarettes, cigars, pipes					
67.	BARBITURATES HYPNOTICS (Downers except Methaqualones)					
68.	METHAQUALONES					
69.	TRANQUILIZERS					
70.	OPIATES heroin, morphine					
71.	COCAINE					
72.	CAFFEINE coffee, tea					
73.	HALLUCINOGENS (LSD, STP, PCP) mescaline					
74.	MARIJUANA					

Drug Usage Questionnaire

Please indicate how likely it is that your friends will use the following drugs in the next year.

	DRUGS	1 DEFINITELY WILL	2 PROBABLY WILL	3 DON'T KNOW	4 PROBABLY WILL NOT	5 DEFINITELY WILL NOT
75.	GLUE					
76.	AMPHETAMINES diet pills, speed, (uppers)					
77.	ALCOHOL					
78.	NICOTINE cigarettes, cigars, pipes					
79.	BARBITURATES HYPNOTICS (Downers except Methaqualones)					
80.	METHAQUALONES					
81.	TRANQUILIZERS					
82.	OPIATES heroin, morphine					
83.	COCAINE					
84.	CAFFEINE coffee, tea					
85.	HALLUCINOGENS (LSD, STP, PCP) mescaline					
86.	MARIJUANA					

Drug Usage Questionnaire

Please indicate how likely it is that you will ever use the following drugs.

	DRUGS	1 DEFINITELY WILL	2 PROBABLY WILL	3 DON'T KNOW	4 PROBABLY WILL NOT	5 DEFINITELY WILL NOT
87.	GLUE					
88.	AMPHETAMINES diet pills, speed, (uppers)					
89.	ALCOHOL					
90.	NICOTINE cigarettes, cigars, pipes					
91.	BARBITURATES HYPNOTICS (Downers except Methaqualones)					
92.	METHAQUALONES					
93.	TRANQUILIZERS					
94.	OPIATES heroin, morphine					
95.	COCAINE					
96.	CAFFEINE coffee, tea					
97.	HALLUCINOGENS (LSD, STP, PCP) mescaline					
98.	MARIJUANA					

Drug Usage Questionnaire

Please indicate how likely it is that your friends will ever use the following drugs.

	DRUGS	1 DEFINITELY WILL	2 PROBABLY WILL	3 DON'T KNOW	4 PROBABLY WILL NOT	5 DEFINITELY WILL NOT
99.	GLUE					
100.	AMPHETAMINES diet pills, speed, (uppers)					
101.	ALCOHOL					
102.	NICOTINE cigarettes, cigars, pipes					
103.	BARBITURATES HYPNOTICS (Downers except Methaqualones)					
104.	METHAQUALONES					
105.	TRANQUILIZERS					
106.	OPIATES heroin, morphine					
107.	COCAINE					
108.	CAFFEINE coffee, tea					
109.	HALLUCINOGENS (LSD, STP, PCP) mescaline					
110.	MARIJUANA					

APPENDIX C

APPENDIX C

INTRODUCTION

TO

SELF-ESTEEM

Now, you will be asked questions concerning feelings you may have about yourself. We realize that what you feel about yourself may change from day to day. Therefore, for this questionnaire, answer the questions on the basis of how you feel about yourself right now.

111. Are you ever troubled with sick headaches?

a. Often
b. Sometimes
c. Almost never
d. Never

112. I certainly feel useless at times.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

113. Do you ever bite your fingernails now?

a. Often
b. Sometimes
c. Almost never
d. Never

114. Do you often find yourself daydreaming about the type of person you expect to be in the future?

a. Very often
b. Sometimes
c. Rarely
d. Never

115. Most of the time I would rather sit and daydream than do anything else.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

116. Do you ever have trouble getting to sleep or staying asleep?

a. Often
b. Sometimes
c. Almost never
d. Never

117. In general, how would you say you feel most of the time---in good spirits or low spirits?

a. Very good spirits
b. Fairly good spirits
c. Fairly low spirits
d. Very low spirits

118. Some people say that most people can be trusted. Others say you can't be too careful in your dealings with people. How do you feel about it?

a. Most people can be trusted
b. Some people can be trusted
c. You can't be too careful sometimes
d. You can't be too careful all the time

119. Does your opinion of yourself tend to change a good deal, or does it always continue to remain the same?

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

120. I feel I do not have much to be proud of.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

121. How often do you feel downcast and dejected?

a. Very often
b. Fairly often
c. Rarely
d. Never

122. I guess you could call me a "dreamer."

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

123. Human nature is really cooperative.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

124. I take a positive attitude toward myself.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

125. I wish I could be as happy as others seem to be.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

126. I feel that I have a number of good qualities.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

127. How sensitive are you to criticism?

a. Extremely sensitive
b. Quite sensitive
c. Somewhat sensitive
d. Not sensitive

128. On the whole, I think I am quite a happy person.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

129. No one is going to care much what happens to you, when you get right down to it.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

130. I have noticed that my ideas about myself seem to change very quickly.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

131. Would you say that most people are more inclined to help others or more inclined to look out for themselves?

a. To help others most of the time
b. To help others some of the time
c. To look out for themselves some of the time
d. To look out for themselves most of the time

132. If you don't watch yourself, people will take advantage of you.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

133. On the whole, I am satisfied with myself.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

134. I wish I could have more respect for myself.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

135. Are you ever bothered by pressures or pains in the head?

a. Often
b. Sometimes
c. Almost never
d. Never

136. How disturbed do you feel when anyone laughs at you or blames you for something you have done wrong?

a. Deeply disturbed
b. Disturbed
c. Fairly disturbed
d. Not disturbed

137. Are you ever bothered by your heart beating hard?

a. Often
b. Sometimes
c. Almost never
d. Never

138. I daydream a good deal of the time.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

139. On the whole, how happy would you say you are?

a. Very happy
b. Fairly happy
c. Not very happy
d. Very unhappy

140. I get a lot of fun out of life.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

141. Are you ever bothered by shortness of breath when not exercising or not working hard?

a. Often
b. Sometimes
c. Almost never
d. Never

142. Are you ever troubled by your hands sweating so that they feel damp and clammy?

a. Often
b. Sometimes
c. Almost never
d. Never

143. All in all, I am inclined to feel that I am a failure.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

144. Are you bothered by nervousness?

a. Often
b. Sometimes
c. Almost never
d. Never

145. Do your hands ever tremble enough to bother you?

a. Often
b. Sometimes
c. Almost never
d. Never

146. I feel that nothing, or almost nothing, can change the opinion I currently hold of myself.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

147. Criticism or scolding hurts me terribly.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

148. I feel that I'm a person of worth, at least on an equal plane with others.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

149. Do you ever find that on one day you have one opinion of yourself and on another day you have a different opinion?

a. Yes, this happens often
b. Yes, this happens sometimes
c. Yes, this rarely happens
d. No, this never happens

150. Some days I have a very good opinion of myself; other days I have a very poor opinion of myself.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

151. At times I think I am no good at all.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

152. I am able to do things as well as most other people.

a. Strongly agree
b. Agree
c. Disagree
d. Strongly disagree

153. Are you ever bothered by nightmares?

a. Often
b. Sometimes
c. Almost never
d. Never

APPENDIX D

APPENDIX D

INTRODUCTION

TO

THE EMPATHY TRAINING QUESTIONNAIRE

One important aspect of the S.T.R.I.D.E. training program involves teaching people how to listen to others and help them with their problems.

In this questionnaire, you will be asked how a potential "helper" should respond to the "person in need."

The Empathy Training Questionnaire

154. In helping someone, the helper should

a. keep questions to a minimum
b. keep response short
c. avoid giving suggestions
d. all of the above
e. none of the above

155. In helping someone, the person in need

a. clarifies his problems
b. explores alternatives
c. plans strategies for change
d. tests out alternatives
e. all of the above

156. In a helping relationship, the helper should first

a. help the person in need understand the feeling he's experiencing at that time
b. help the person in need pinpoint who or what is causing his situation to exist
c. find out if the person in need's feelings are justified or not
d. A and B
e. B and C

157. During the latter stages of a helping relationship, the helper should

a. organize the order of activities that need to be followed to carry out a solution plan
b. help the person in need identify the things that might cause the person in need to give up
c. help the person in need understand what kinds of things the person in need is afraid will happen if he tries to solve his problem
d. B and C
e. A and C

158. In helping people, the trained helper

a. responds to stated feelings of the person in need
b. checks out other feelings that may be present but are not clearly stated by the person in need
c. points out the thing he sees in the person in need that does not seem productive
d. B and C
e. A and B

159. When a person who trusts you and respects your opinion comes to you with a problem and wants more than just empathy, you should

a. tell the person what you would do in that situation
b. ask him what he thinks he should do
c. joke with the speaker occasionally
d. persuade the speaker to change the behaviors you see as destructive
e. not let him kid himself about the ways he's feeling

160. In helping the person in need solve his problem, the helper should

a. help the person in need identify the initial changes he wants to make in order that his final goal may be reached
b. help to explore what he will do should an alternative not work
c. help the person in need identify the amount of success the helper needs
d. A and C
e. all of the above

161. The best thing to do when a person comes to you with a problem initially

a. call the police
b. send him home
c. find out what the problem is
d. find out what the person is feeling
e. find out what can be done to solve his problem

162. After a person has talked for a long time, or has talked to you on many occasions about the same problem, the best thing you can do for a person like this is to

a. refer him to a psychologist
b. tell him how he might be able to get out of his situation
c. ask him why he keeps doing the same thing
d. find out who or what is causing his problem
e. ask what he would like to change

163. In helping someone, the helper should

a. divert the person in need
b. ask open-ended questions
c. joke with the person in need
d. persuade the person in need
e. B and D

164. When helping someone, if the person in need says, "My parents have been fighting, and it really hurts me to watch it," the helper should respond by saying,

a. "It sounds like your parents fight as much as mine do, but it's normal."
b. "It sounds like your parents fight a lot."
c. "It sounds like you're thinking about running away from home?"
d. "It sounds like you feel hurt."
e. "I hear you saying that you're hurt, but I also get the feeling that you're pretty frustrated."

165. When helping someone, if the person in need says, "All my friends are smoking marijuana, and I'm scared to try it. But, it seems like when I don't use it, my friends don't like to be around me," the helper should respond by saying,

a. "Well, you know, it's not a dangerous thing. Why don't you use it."
b. "You seem pretty scared."
c. "You should pick new friends."
d. "Since drugs are bad for your health, you should never experiment with them."
e. "You seem scared and pretty lonely."

166. When helping someone, if the person in need says, "I really don't think that my parents love me. They always put me down when I try to talk with them," the helper should respond by saying,

a. "Of course they love you."
b. "Don't be silly, all parents love their children."
c. "It sounds like you must have done something pretty terrible. What did you do?"
d. "It sounds like it hurts a lot when your parents don't listen to you."
e. "It sounds like everything will work out all right."

167. When helping someone, if the person in need says, "I can't seem to get out of this depression...Well, it's not a depression because...anyway, going to school and working at the same time...I never get to have, uh, well, I guess sometimes I do O.K. It's just that I want to get away... no, not get away...just rest. Maybe I could quit school," the helper should respond by saying,

a. "I don't understand. What can I say?"
b. "This thing is really troubling you, but I'm really feeling pretty confused."
c. "I hear you saying that you feel depressed."

d. "I hear you saying that you feel confused and afraid."
e. "Why don't you take some time off from school and from work?"

168. When helping someone, if the person in need says, "I'm afraid my son is getting into drugs because his grades in school have gone down." the helper should respond by saying,

a. "You should talk to his teachers."
b. "You seem to be saying that you are afraid that your son is using drugs."
c. "You seem worried about your son's grades."
d. "You seem to be worried about your son's grades, and you're trying to blame it on dope."
e. B and C

Questionnaire Answers

The Drug Overdose Treatment Questionnaire

9.	D	19.	E	29.	A
10.	D	20.	E	30.	A
11.	C	21.	B	31.	A
12.	D	22.	A	32.	D
13.	D	23.	E	33.	E
14.	E	24.	A	34.	A
15.	E	25.	D	35.	A
16.	E	26.	C	36.	A
17.	E	27.	B	37.	C
18.	D	28.	B	38.	D

Jackson Empathy Questionnaire

Empathy Technique (EMT)				Empathy Problem Solving (EMP)			
154.	D	158.	A	162.	E	166.	D
155.	E	159.	B	163.	B	167.	B
156.	A	160.	E	164.	E	168.	E
157.	D	161.	D	165.	E		

APPENDIX E

APPENDIX E

THE ADMINISTRATIVE AGREEMENT

Agreement

The following administrative agreement between the Students, Teachers, and Residents Involved in Drug Education (S.T.R.I.D.E.) program of the Comprehensive Drug Treatment Programs and the research director insures that all parties are cognizant of their rights and privileges as well as their duties and responsibilities.

The project is being enacted in an effort to determine the effects of the S.T.R.I.D.E. drug education program on drug usage and self-esteem of high school students.

In order that the responsibilities of all individuals involved in the project are not misunderstood, the following responsibilities of each are hereby agreed to:

ON THE PART OF THE S.T.R.I.D.E. ADMINISTRATION OF THE COMPREHENSIVE DRUG TREATMENT PROGRAMS--

1. That the research director will have access to the S.T.R.I.D.E. office, equipment, and personnel in preparing questionnaires and performing other related activities.

2. That the staff will agree to random assignment of students within any one school-subject to the agreements of the participating schools-into Group I, the

first treatment group, and Group II, the second treatment group. Group II will not begin the treatment phase until after Group I has completed its treatment phase.

3. That the staff will aid the research director in any problems with school administrators related to administering tests and random assignment.

4. That all data concerning project participants will be made available to the project director.

ON THE PART OF THE RESEARCH DIRECTOR--

1. That he shall assume complete responsibility for the evaluation of S.T.R.I.D.E. in the proposed school systems as long as it is understood that this does not limit other evaluation from taking place during this period.

2. That he shall keep the confidentiality of all data concerning the project participants.

3. That he shall make available all reports on research evaluation of the program to the S.T.R.I.D.E. staff.

These agreements shall be in effect during February 1973 to October 1973.

S.T.R.I.D.E. Administration-

_____

COMPREHENSIVE DRUG TREATMENT PROGRAMS

_____

Research Director

_____

Date

_____

APPENDIX F

Appendix F

Table 11.

Analysis of Variance of Pre-Test Scores for the Treatment Effects

	Variable	df	Hypotheses Mean Squares	Error	Univariate F	P Less Than
1.	Empathy Technique (EMT)	1,64	6.998	1.920	3.644	.061
2.	Sex	1,64	.546	.189	2.882	.095
3.	Self-Esteem (SSE)	1,64	591.748	268.027	2.208	.142
4.	Empathy Problem Solving (EMP)	1,64	5.828	2.961	1.968	.166
5.	Self-Usage of Dangerous Drugs (SHD)	1,64	245.499	180.870	1.357	.248
6.	Friends'-Usage of Marijuana (MFKS)	1,64	6.770	10.406	.651	.423
7.	Overdose Drug Knowledge (OD)	1,64	4.646	13.894	.334	.565
8.	Self-Usage of Caffeine (SCF)	1,64	3.438	13.752	.250	.619
9.	Age	1,64	.214	.947	.226	.636

Table 11. (continued)

	Variable	df	Hypotheses Mean Squares	Error	Univariate F	P Less Than
10.	Self-Usage of Nicotine (SKS)	1,64	3.543	22.818	.155	.695
11.	Friends'-Usage of Caffeine (FCF)	1,64	.417	8.289	.050	.823
12.	Friends'-Usage of Nicotine (FSK)	1,64	.166	8.155	.020	.887
13.	Friends'-Usage of Alcohol (FAL)	1,64	.039	4.364	.009	.925
14.	Friends'-Usage of Dangerous Drugs (FHD)	1,64	2.831	374.927	.008	.931
15.	Self-Usage of Alcohol (SAL)	1,64	.024	9.174	.003	.959
16.	Grade	1,64	.002	.605	.003	.961
17.	Self-Usage of Marijuana (MSKS)	1,64	.013	14.995	.001	.976

Table 12.

Analysis of Variance of Pre-Test Scores for the School Effects

	Variable	df	Hypotheses Mean Squares	Error	Univariate F	P Less Than
1.	Grade	1,64	26.233	.605	43.235**[1]	.000
2.	Self-Usage of Marijuana (MSKS)	1,64	532.926	14.995	35.540**	.000
3.	Age	1,64	31.391	.947	33.152**	.000
4.	Self-Usage of Dangerous Drugs (SHD)	1,64	3108.131	180.870	17.184**	.000
5.	Self-Usage of Marijuana (MSKS)	1,64	98.351	10.406	9.451**	.003
6.	Self-Usage of Nicotine (SKS)	1,64	160.249	22.818	7.023**	.010
7.	Self-Usage of Caffeine (SCF)	1,64	72.531	13.752	5.274*[2]	.025
8.	Self-Esteem (SSE)	1,64	1303.877	268.027	4.865*	.031
9.	Self-Usage of Alcohol (SAL)	1,64	38.959	9.174	4.247*	.043

[1] $p < .01$.

[2] $p < .05$.

Table 12. (continued)

	Variable	df	Hypotheses Mean Squares	Error	Univariate F	P Less Than
10.	Friends'-Usage of Dangerous Drugs (FHD)	1,64	869.565	374.927	2.319	.133
11.	Sex	1,64	.336	.189	1.771	.188
12.	Empathy Problem Solving (EMP)	1,64	2.887	2.961	.975	.327
13.	Overdose Drug Knowledge (OD)	1,64	8.737	13.894	.629	.431
14.	Friends'-Usage of Alcohol (FAL)	1,64	2.722	4.364	.624	.433
15.	Friends'-Usage of Nicotine (FSK)	1,64	1.780	8.155	.218	.642
16.	Empathy Technique (EMT)	1,64	.296	1.920	.154	.696
17.	Friends'-Usage of Caffeine (FCF)	1,64	.004	8.289	.001	.982

Table 13.

Analysis of Variance of Pre-Test Scores for the Attrition Effects

	Variable	df	Hypotheses Mean Squares	Error	Univariate F	P Less Than
1.	Sex	1,64	1.387	.189	7.322**	.009
2.	Age	1,64	4.533	.947	4.787*	.032
3.	Empathy Problem Solving (EMP)	1,64	14.100	2.961	4.761*	.033
4.	Empathy Technique (EMT)	1,64	6.573	1.920	3.423	.069
5.	Self-Usage of Dangerous Drugs (SHD)	1,64	608.987	180.870	3.367	.071
6.	Overdose Drug Knowledge (OD)	1,64	41.778	13.894	3.007	.088
7.	Self-Esteem (SSE)	1,64	724.810	268.027	2.704	.105
8.	Self-Usage of Marijuana (MSKS)	1,64	35.562	14.995	2.372	.129
9.	Grade	1,64	1.132	.605	1.870	.176
10.	Self-Usage of Caffeine (SCF)	1,64	19.433	13.752	1.413	.239

Table 13. (continued)

	Variable	df	Hypotheses Mean Squares	Error	Univariate F	P Less Than
11.	Friends'-Usage of Dangerous Drugs (FHD)	1,64	433.396	374.927	1.156	.286
12.	Self-Usage of Alcohol (SAL)	1,64	7.225	9.174	.788	.378
13.	Friends'-Usage of Alcohol (FAL)	1,64	3.168	4.364	.726	.397
14.	Friends'-Usage of Marijuana (MFKS)	1,64	.991	10.406	.095	.759
15.	Friends'-Usage of Nicotine (FSK)	1,64	.5513	8.155	.068	.796
16.	Friends'-Usage of Caffeine (FCF)	1,64	.071	8.289	.009	.927
17.	Self-Usage of Nicotine (SKS)	1,64	.002	22.818	.000	.993

Table 14.

Analysis of Variance of Pre-Test Scores for the

Treatment X School Interaction Effects

	Variable	df	Hypothesis Mean Squares	Error	Univariate F	P Less Than
1.	Empathy Technique (EMT)	1,64	12.600	1.920	6.562*	.013
2.	Friends'-Usage of Alcohol (FAL)	1,64	17.770	4.364	4.072*	.048
3.	Friends'-Usage of Caffeine (FCF)	1,64	10.281	8.289	1.240	.270
4.	Self-Usage of Alcohol (SAL)	1,64	11.353	9.174	1.238	.270
5.	Sex	1,64	.180	.189	.951	.333
6.	Self-Usage of Caffeine (SCF)	1,64	9.885	13.752	.719	.400
7.	Friends'-Usage of Nicotine (FSK)	1,64	3.367	8.155	.413	.523
8.	Overdose Drug Knowledge (OD)	1,64	4.400	13.894	.317	.576
9.	Friends'-Usage of Dangerous Drugs (FHD)	1,64	116.695	374.927	.311	.579

Table 14. (continued)

	Variable	df	Hypothesis Mean Squares	Error	Univariate F	P Less Than
10.	Self-Usage of Dangerous Drugs (SHD)	1,64	39.344	180.870	.218	.643
11.	Empathy Problem Solving (EMP)	1,64	.352	2.961	.119	.732
12.	Self-Usage of Marijuana (MSKS)	1,64	.745	14.995	.050	.824
13.	Self-Usage of Nicotine (SKS)	1,64	1.094	22.818	.048	.827
14.	Self-Esteem (SSE)	1,64	5.563	268.027	.021	.886
15.	Age	1,64	.013	.947	.013	.908
16.	Grade	1,64	.004	.605	.006	.939
17.	Friends'-Usage of Marijuana (MFKS)	1,64	.057	10.406	.006	.941

Table 15.

Analysis of Variance of Pre-Test Scores for the

Treatment X Attrition Interaction Effects

	Variable	df	Hypothesis Mean Squares	Error	Univariate F	P Less Than
1.	Overdose Drug Knowledge (OD)	1,64	24.929	13.844	1.794	.185
2.	Grade	1,64	.925	.605	1.527	.221
3.	Self-Usage of Caffeine (SCF)	1,64	14.001	13.752	1.019	.317
4.	Self-Usage of Alcohol (SAL)	1,64	8.569	9.174	.934	.338
5.	Sex	1,64	.171	.189	.902	.346
6.	Self-Esteem (SSE)	1,64	235.107	268.027	.877	.353
7.	Empathy Technique (EMT)	1,64	1.465	1.920	.763	.386
8.	Self-Usage of Dangerous Drugs (SHD)	1,64	121.358	180.870	.671	.416
9.	Empathy Problem Solving (EMP)	1,64	1.775	2.961	.599	.442

Table 15. (continued)

	Variable	df	Hypothesis Mean Squares	Error	Univariate F	P Less Than
10.	Friends'-Usage of Nicotine (FSK)	1,64	2.884	8.155	.354	.554
11.	Friends'-Usage of Marijuana (MFKS)	1,64	2.995	10.406	.288	.594
12.	Friends'-Usage of Dangerous Drugs (FHD)	1,64	98.775	374.927	.264	.610
13.	Friends'-Usage of Alcohol (FSL)	1,64	1.026	4.364	.235	.629
14.	Friends'-Usage of Caffeine (FCF)	1,64	1.933	8.289	.233	.631
15.	Self-Usage of Marijuana (MSKS)	1,64	1.001	14.995	.067	.797
16.	Self-Usage of Nicotine (SKS)	1,64	1.192	22.818	.052	.820
17.	Age	1,64	.012	.947	.013	.909

Table 16.

Analysis of Variance of Pre-Test Scores for the

School X Attrition Interaction Effects

	Variable	df	Hypothesis Mean Squares	Error	Univariate F	P Less Than
1.	Grade	1,64	2.123	.605	3.506	.066
2.	Self-Usage of Marijuana (MSKS)	1,64	21.572	14.995	1.439	.235
3.	Empathy Problem Solving (EMP)	1,64	3.053	2.961	1.031	.314
4.	Overdose Drug Knowledge (OD)	1,64	13.680	13.894	.985	.325
5.	Self-Esteem (SSE)	1,64	192.947	268.027	.720	.399
6.	Age	1,64	.663	.947	.700	.406
7.	Friends'-Usage of Caffeine (FCF)	1,64	5.714	8.289	.689	.410
8.	Sex	1,64	.110	.189	.582	.449
9.	Self-Usage of Alcohol (SAL)	1,64	4.850	9.174	.529	.470
10.	Self-Usage of Nicotine (SKS)	1,64	11.984	22.818	.525	.471

Table 16. (continued)

	Variable	df	Hypothesis Mean Squares	Error	Univariate F	P Less Than
11.	Empathy Technique (EMT)	1,64	.727	1.920	.378	.514
12.	Friends'-Usage of Alcohol (FAL)	1,64	.648	4.364	.148	.701
13.	Friends'-Usage of Marijuana (MFKS)	1,64	.824	10.406	.079	.779
14.	Self-Usage of Caffeine (SCF)	1,64	.862	13.752	.063	.803
15.	Self-Usage of Dangerous Drugs (SHD)	1,64	4.624	180.870	.026	.874
16.	Friends'-Usage of Dangerous Drugs (FHD)	1,64	6.458	374.927	.017	.896
17.	Friends'-Usage of Nicotine (FSK)	1,64	.001	8.155	.000	.992

Table 17.

Analysis of Variance of Pre-Test Scores for the

Treatment X School X Attrition Interaction Effects

	Variable	df	Hypothesis Mean Squares	Error	Univariate F	P Less Than
1.	Self-Usage of Dangerous Drugs (SHD)	1,64	771.395	180.870	4.265*	.043
2.	Friends'-Usage of Nicotine (FSK)	1,64	27.130	8.155	3.327	.073
3.	Friends'-Usage of Marijuana (MFKS)	1,64	26.326	10.406	2.530	.117
4.	Self-Usage of Marijuana (MSKS)	1,64	30.502	14.995	2.034	.159
5.	Self-Usage of Caffeine (SCF)	1,64	26.326	13.752	1.914	.171
6.	Friends'-Usage of Dangerous Drugs (FHD)	1,64	416.942	374.927	1.112	.296
7.	Self-Esteem (SSE)	1,64	244.175	268.027	.911	.344
8.	Self-Usage of Nicotine (SKS)	1,64	15.081	22.818	.661	.419

Table 17. (continued)

	Variable	df	Hypothesis Mean Squares	Error	Univariate F	P Less Than
9.	Friends'-Usage of Alcohol (FAL)	1,64	2.639	4.364	.605	.440
10.	Age	1,64	.572	.947	.604	.440
11.	Empathy Technique (EMT)	1,64	1.090	1.920	.568	.454
12.	Grade	1,64	.149	.605	.246	.622
13.	Overdose Drug Knowledge (OD)	1,64	3.211	13.894	.231	.632
14.	Sex	1,64	.020	.189	.108	.744
15.	Empathy Problem Solving (EMP)	1,64	.261	2.961	.088	.768
16.	Self-Usage of Alcohol (SAL)	1,64	.520	9.174	.057	.813
17.	Friends'-Usage of Caffeine (FCF)	1,64	.412	8.289	.050	.824

APPENDIX G

Appendix G

Table 18.

Analysis of Variance of Sample with Complete Data

at All Three Measuring Points for the Treatment Effects

	Variable	df	Mean Squares	Error	F	P
1.	Empathy - Total Score	1,41	167.190	11.257	14.852**	.0005
2.	Empathy Technique (EMT)	1,41	45.986	3.907	11.771**	.001
3.	Empathy Problem Solving (EMP)	1,41	37.809	3.978	9.504**	.004
4.	Self-Usage of Marijuana (MSKS)	1,41	86.698	48.692	1.781	.190
5.	Overdose Drug Knowledge (OD)	1,41	24.198	21.09	1.147	.291
6.	Self-Usage of Dangerous Drugs (SHD)	1,41	520.001	460.245	1.130	.294
7.	Self-Esteem (SSE)	1,41	945.216	1311.892	.721	.401
8.	Self-Usage of Nicotine (SKS)	1,41	32.400	58.719	.552	.462

Table 18. (continued)

	Variable	df	Mean Squares	Error	F	P
9.	Drugs - Total Score	1,41	2138.094	5421.866	.394	.534
10.	Self-Usage of Caffeine (SCF)	1,41	10.000	28.429	.352	.556
11.	Friends'-Usage of Nicotine (FSK)	1,41	7.705	22.736	.339	.564
12.	Friends'-Usage of Marijuana (MFKS)	1,41	10.678	32.617	.327	.570
13.	Friends'-Usage of Dangerous Drug (FHD)	1,41	185.857	797.576	.233	.632
14.	Self-Usage of Alcohol (SAL)	1,41	3.872	20.424	.190	.666
15.	Friends'-Usage of Caffeine (FCF)	1,41	.149	10.989	.014	.908
16.	Friends'-Usage of Alcohol (FAL)	1,41	.031	10.655	.003	.957

Table 19.

Analysis of Variance of Sample with Complete Data

at All Three Measuring Points for the School Effects

	Variable	df	Mean Squares	Error	F	P
1.	Overdose Drug Knowledge (OD)	1,41	176.015	21.090	8.345**	.006
2.	Self-Usage of Marijuana (MSKS)	1,41	350.892	48.692	7.207*	.011
3.	Self-Usage of Dangerous Drugs (SHD)	1,41	2343.190	460.245	5.091*	.030
4.	Self-Usage of Alcohol (SAL)	1,41	103.540	20.424	5.070*	.030
5.	Empathy Problem Solving (EMP)	1,41	16.825	3.978	4.229*	.046
6.	Drugs	1,41	13950.758	5421.865	2.573	.116
7.	Self-Usage of Nicotine (SKS)	1,41	131.461	58.719	2.239	.142
8.	Friends'-Usage of Caffeine (FCF)	1,41	22.649	10.989	2.061	.159

Table 19. (continued)

	Variable	df	Mean Squares	Error	F	P
9.	Friends'-Usage of Marijuana (MFKS)	1,41	60.871	32.617	1.866	.179
10.	Empathy	1,41	16.725	11.257	1.486	.230
11.	Friends'-Usage of Alcohol (FAL)	1,41	12.718	10.655	1.194	.281
12.	Self-Esteem (SSE)	1,41	1286.638	1311.892	.981	.328
13.	Self-Usage of Caffeine (SCF)	1,41	8.820	28.429	.310	.581
14.	Friends'-Usage of Nicotine (FSK)	1,41	6.348	22.736	.280	.600
15.	Friends'-Usage of Dangerous Drugs (FHD)	1,41	186.501	797.576	.234	.631
16.	Empathy Technique (EMT)	1,41	.000	3.907	.000	.995

Table 20.

Analysis of Variance of Sample With Complete Data

at All Three Measuring Points for the Time Effects

	Variable	df	Mean Squares	Error	F	P
1.	Empathy	1,41	33.030	3.323	9.940**	.015
2.	Empathy Problem Solving (EMP)	1,41	10.763	1.471	7.319**	.042
3.	Empathy Technique (EMT)	1,41	6.200	1.268	4.886*	.042
4.	Friends'-Usage of Caffeine (FCF)	1,41	12.585	3.897	3.230	.086
5.	Overdose Drug Knowledge (OD)	1,41	16.022	5.373	2.984	.495
6.	Self-Usage of Marijuana (MSKS)	1,41	8.052	2.949	2.730	.457
7.	Self-Usage of Alcohol (SAL)	1,41	6.689	3.460	1.933	.184
8.	Friends'-Usage of Alcohol (FAL)	1,41	2.956	2.503	1.181	.527
9.	Friends'-Usage of Marijuana (MFKS)	1,41	2.585	2.569	1.006	.506

Table 20. (continued)

	Variable	df	Mean Squares	Error	F	P
10.	Self-Usage of Dangerous Drugs (SHD)	1,41	71.467	86.102	.830	.367
11.	Self-Usage of Caffeine (SCF)	1,41	2.807	5.062	.555	.583
12.	Self-Usage of Nicotine (SKS)	1,41	1.622	5.435	.299	.573
13.	Friends'-Usage of Nicotine (FSK)	1,41	.563	3.902	.144	.795
14.	Friends'-Usage of Dangerous Drugs (FHD)	1,41	14.007	143.704	.098	.803
15.	Drugs	1,41	7.570	510.073	.007	.952
16.	Self-Esteem (SSE)	1,41	3.941	680.432	.006	.947

Table 21.

Analysis of Variance of Sample with Complete Data

at All Three Measuring Points for the Treatment X School Interaction Effects

	Variable	df	Mean Squares	Error	F	P
1.	Friends'-Usage of Nicotine (FSK)	1,41	26.195	22.736	1.152	.289
2.	Self-Esteem (SSE)	1,41	1330.729	1311.892	1.014	.320
3.	Friends'-Usage of Marijuana (MFKS)	1,41	30.827	32.617	.945	.337
4.	Self-Usage of Alcohol (SAL)	1,41	17.472	20.424	.856	.361
5.	Empathy Problem Solving (EMP)	1,41	3.300	3.978	.830	.368
6.	Overdose Drug Knowledge (OD)	1,41	16.960	21.090	.804	.375
7.	Self-Usage of Caffeine (SCF)	1,41	11.297	28.429	.397	.532
8.	Friends'-Usage of Caffeine (FCF)	1,41	2.419	10.989	.220	.642
9.	Empathy	1,41	1.758	11.257	.156	.695

Table 21. (continued)

	Variable	df	Mean Squares	Error	F	P
10.	Self-Usage of Marijuana (MSKS)	1,41	6.648	48.692	.137	.714
11.	Friends'-Usage of Dangerous Drugs (FHD)	1,41	72.892	797.576	.091	.764
12.	Empathy Technique (EMT)	1,41	.241	3.907	.062	.805
13.	Friends'-Usage of Alcohol (FAL)	1,41	.376	10.655	.035	.852
14.	Drugs	1,41	196.173	5421.866	.036	.850
15.	Self-Usage of Nicotine (SKS)	1,41	1.711	58.719	.029	.865
16.	Self-Usage of Dangerous Drugs (SHD)	1,41	.386	460.245	.001	.977

Table 22.

Analysis of Variance of Sample with Complete Data

at All Three Measuring Points for the Treatment X Time Interaction Effects

	Variable	df	Mean Squares	Error	F	P
1.	Empathy	1,41	11.353	3.323	3.417	.177
2.	Empathy Problem Solving (EMP)	1,41	3.823	1.471	2.599	.135
3.	Overdose Drug Knowledge (OD)	1,41	9.453	5.370	1.759	.216
4.	Empathy Technique (EMT)	1,41	2.250	1.268	1.757	.427
5.	Friends'-Usage of Marijuana (MFKS)	1,41	2.193	2.569	.854	.412
6.	Self-Usage of Marijuana (MSKS)	1,41	2.461	2.949	.834	.542
7.	Friends'-Usage of Dangerous Drugs (FHD)	1,41	104.394	143.704	.727	.418
8.	Self-Esteem (SSE)	1,41	359.979	680.432	.529	.482
9.	Friends'-Usage of Caffeine (FCF)	1,41	1.520	3.897	.390	.612

Table 22. (continued)

	Variable	df	Mean Squares	Error	F	P
10.	Self-Usage of Dangerous Drugs (SHD)	1,41	32.453	86.102	.377	.542
11.	Friends'-Usage of Alcohol (FAL)	1,41	.890	2.503	.356	.557
12.	Friends'-Usage of Nicotine (FSK)	1,41	.172	3.902	.044	.827
13.	Self-Usage of Caffeine (SCF)	1,41	.211	5.062	.042	.818
14.	Drugs	1,41	7.616	510.073	.015	.901
15.	Self-Usage of Alcohol (SAL)	1,41	.046	3.460	.013	.908
16.	Self-Usage of Nicotine (SKS)	1,41	.045	5.435	.008	.939

Table 23.

Analysis of Variance of Sample with Complete Data

at All Three Measuring Points for the School X Time Interaction Effects

	Variable	df	Mean Squares	Error	F	P
1.	Self-Usage of Dangerous Drugs (SHD)	1,41	590.709	86.102	6.861*	.036
2.	Friends'-Usage of Dangerous Drugs (FHD)	1,41	906.481	143.704	6.308*	.019
3.	Empathy Technique (EMT)	1,41	7.838	1.268	6.182*	.402
4.	Drugs	1,41	2796.282	510.073	5.482*	.034
5.	Self-Usage of Marijuana (MSKS)	1,41	15.142	2.949	5.135*	.033
6.	Self-Usage of Caffeine (SCF)	1,41	11.287	5.062	2.230	.331
7.	Friends'-Usage of Marijuana (MFKS)	1,41	3.202	2.569	1.247	.782
8.	Empathy Problem Solving (EMP)	1,41	1.763	1.471	1.199	.348

Table 23. (continued)

	Variable	df	Mean Squares	Error	F	P
9.	Friends'-Usage of Caffeine (FCF)	1,41	3.459	3.897	.888	.398
10.	Self-Esteem (SSE)	1,41	473.241	680.432	.696	.422
11.	Self-Usage of Alcohol (SAL)	1,41	1.867	3.460	.540	.556
12.	Empathy	1,41	16.578	3.323	.499	.383
13.	Overdose Drug Knowledge (OD)	1,41	.780	5.370	.145	.803
14.	Friends'-Usage of Alcohol (FAL)	1,41	.307	2.503	.123	.742
15.	Friends'-Usage of Nicotine (FSK)	1,41	.401	3.902	.103	.837
16.	Self-Usage of Nicotine (SKS)	1,41	.482	5.435	.089	.779

Table 24.

Analysis of Variance of Sample with Complete Data at All Three

Measuring Points for the Treatment X School X Time Interaction Effects

Variable	df	Mean Squares	Error	F	P
1. Self-Usage of Marijuana (MSKS)	1,41	17.111	2.949	5.802*	.184
2. Self-Usage of Dangerous Drugs (SHD)	1,41	440.199	86.102	5.113*	.030
3. Empathy Technique (EMT)	1,41	4.364	1.268	3.442	.071
4. Drugs	1,41	1191.982	510.073	2.337	.141
5. Overdose Drug Knowledge (OD)	1,41	10.128	5.370	1.886	.422
6. Empathy Problem Solving (EMP)	1,41	2.362	1.471	1.606	.311
7. Friends'-Usage of Marijuana (MFKS)	1,41	3.795	2.569	1.477	.485
8. Empathy	1,41	4.115	3.323	1.238	.533
9. Self-Usage of Caffeine (SCF)	1,41	5.469	5.062	1.080	.336

Table 24. (continued)

	Variable	df	Mean Squares	Error	F	P
10.	Self-Usage of Alcohol (SAL)	1,41	1.918	3.460	.553	.668
11.	Friends'-Usage of Alcohol (FAL)	1,41	1.239	2.503	.495	.536
12.	Friends'-Usage of Dangerous Drugs (FHD)	1,41	57.928	143.704	.403	.548
13.	Self-Usage of Nicotine (SKS)	1,41	1.332	5.435	.245	.615
14.	Friends'-Usage of Caffeine (FCF)	1,41	.670	3.897	.172	.704
15.	Self-Esteem (SSE)	1,41	49.114	680.432	.072	.792
16.	Friends'-Usage of Nicotine (FSK)	1,41	.229	3.902	.059	.839