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# INDIVIDUAL, TEAM, AND COMMUNITY LEVEL VARIABLES AS PREDICTORS OF EFFECTIVENESS OF DRUG EDUCATION TEAMS

by
Leslie Horst

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy
(Psychology)
in The University of Michigan
1976

Doctoral Committee:

Professor Ronald O. Lippitt, Co-Chairman
Professor Richard D. Mann, Co-Chairman
Professor Joseph Veroff
Assistant Professor Beverly Ware

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TABLE OF CONTENTS

ACKNOWLEDGMENTS..... ii

LIST OF TABLES..... vii

LIST OF FIGURES..... x

LIST OF APPENDICES..... xi

CHAPTER

I. INTRODUCTION: PURPOSE AND CONTEXT OF THE STUDY.. 1

Purpose
Context
Organization

II. CONTEXT OF THE DARTE PROGRAM..... 5

A Perspective on Drug Abuse by Youth
Evaluation of Drug Education in General
Evaluation of Drug Education in Michigan
and Wayne County
The DARTE Program

III. THEORY AND REVIEW OF LITERATURE..... 21

Introduction
DARTE as a Change Agent
Strategies for Change
Comparison with Social Movements
DARTE as a Socialization Organization
Individual Level of Analysis
Perceived Characteristics of DARTE as
a Socializing Agent
Knowledge and Attitude Change
Individual Differences in Socializees
Team Level of Analysis
Community Level of Analysis
Comparison of the Three Levels of Analysis
Restatement of Hypotheses

IV. METHOD.....53

Subjects
Characteristics
Selection and Recruiting
Research Instruments
Drug Knowledge Inventory
Drug Education Opinion Inventory
Activity Questionnaire
Interview

Procedure
Drug Knowledge Inventory and Opinion Inventory
Activity Questionnaires
Interview
Collection of Additional Data
Ratings by the DARTE Director and the I.S.R. Research Group
Community Level Data
Modes of Data Analysis
Comments on the Design

V. RESULTS.....76

Introduction
Dependent Measures
Format for Discussion of Hypotheses
Individual Level of Analysis
Team Level of Analysis
Community Level of Analysis
Comparison of Levels of Analysis
Summary

VI. DISCUSSION.....134

Methodological Issues
Questionnaire Measures
Adult-Student Differences
Dependent Variables
Studying Communities
The Problem of Small Samples
Substantive Issues
Individual Level
Team Level
Community Level
Concluding Comments
Implications for Socialization Theory
Implications for Teams
Implications for Research

TABLES.....157

APPENDIX.....202

REFERENCES.....264

LIST OF TABLES


| Table | | Page |
|---|---|---|
| I | Descriptive Statistics for Dependent Variables for DARTE Teams | 157 |
| II | Intercorrelations of the Dependent Variables | 158 |
| III | Correlations of "helpfulness of DARTE training staff" with dependent variables | 160 |
| IVa | Correlations with Dependent Variables of Teams' Pretest Discrepancy Scores on the Opinion Inventory -- Interview Sample | 161 |
| IVb | Correlations with Dependent Variables of Teams' Pretest Discrepancy Scores on the Opinion Inventory -- Inclusive Sample | 162 |
| V | Correlations of Dependent Variables with Credibility Variables | 163 |
| VIa | Correlations of Dependent Variables with Mean Errors on Pretest for the Drug Knowledge Inventory -- Interview Sample | 164 |
| VIb | Correlations of Dependent Variables with Mean Errors on Pretest for the Drug Knowledge Inventory -- Inclusive Sample | 165 |
| VIIa | Correlations of Dependent Variables with Mean Change Scores in Errors in the Drug Knowledge Inventory -- Interview Sample | 166 |
| VIIb | Correlations of Dependent Variables with Mean Change Scores in Errors on the Drug Knowledge Inventory -- Inclusive Sample | 167 |
| VIIIa | Correlations of Dependent Variables with Changes in Team Discrepancy from an "Ideal Score" on Opinion Inventory -- Interview Sample | 168 |
| VIIIb | Correlations of Dependent Variables with Changes in Discrepancy from an "Ideal Score" on Opinion Inventory -- Inclusive Sample | 169 |
| IXa | t-tests on Dependent Variables for Differences between Teams missing vs. not missing Change Data on the Drug Knowledge Inventory | 170 |
| IXb | t-tests on Dependent Variables for Differences between Teams missing vs. not missing Change Data on the Opinion Inventory | 171 |

LIST OF TABLES


| Table | | Page |
|---|---|---|
| X | Analysis of Variance by Age and Sex of Pretest Errors on Drug Knowledge Inventory | 172 |
| XI | Analysis of Variance by Age and Sex of Change Scores on Drug Knowledge Inventory | 173 |
| XII | Analysis of Covariance by Age and Sex of Post-test Errors on Drug Knowledge Inventory (Pretest Score as Covariate) | 174 |
| XIII | Analysis of Variance by Age and Sex of Pretest Discrepancy Score on Opinion Inventory | 176 |
| XIV | Analysis of Variance by Age and Sex of Change Scores on Opinion Inventory | 177 |
| XV | Analysis of Covariance by Age and Sex of Post-test Discrepancy Score on Opinion Inventory (Pretest Score as Covariate) | 178 |
| XVI | Analysis of Variance by Age and Sex of Accuracy of Drug Information (#9) | 180 |
| XVII | Summary of Findings for Analyses of Variance on Selected Interview Questions | 181 |
| XVIII | Correlations of Two Team Development Variables with Dependent Variables | 184 |
| XIX | Correlations of Student Involvement with Dependent Variables | 185 |
| XX | Correlations of Team Communication Variables with each other and Dependent Variables | 186 |
| XXI | Correlations of Leadership Variables with Dependent Variables | 187 |
| XXII | Correlations of Team Commitment Variables with Dependent Variables | 188 |
| XXIII | t-tests on Dependent Variables for Differences between Teams which did not and did include Administrators | 189 |
| XXIV | Intercorrelations of Variables Concerning the Drug Problem | 190 |

LIST OF TABLES


| Table | | Page |
|---|---|---|
| XXV | Correlations of Drug Problem Variables with Dependent Variables | 191 |
| XXVI | Correlations of Income Relative to the Rest of Wayne County with Dependent Variables | 192 |
| XXVII | t-tests on Dependent Variables for Differences between Teams for which Administrative Nonsupport was mentioned vs. not mentioned | 193 |
| XXVIII | Least Squares Regression: Activities Accomplishment Rated by DARTE | 194 |
| XXIX | Independent Contributions of Independent Variables in Six Multiple Regression Analyses | 195 |
| XXX | Correlations of Number of Students Interviewed in each School District with Dependent Variables | 199 |
| XXXI | Correlations for the Number of Students included in the Team Score with Credibility Variables and Questionnaire Variables | 200 |
| XXXII | Summary of Analyses of Variance by Age and Sex for Three Interview Variables showing Sex Differences | 201 |

# LIST OF FIGURES

Figure — Page

One: Framework for Analysis of Socialization in Organizations..... 31

LIST OF APPENDICES

A Letters Requesting Subject Participation.....202

B Drug Knowledge Inventory.....205

C Drug Education Opinion Inventory.....207

D Activity Questionnaire.....209

E Interview.....213

F Case Studies of DARTE School District Teams.....221

G Descriptive Statistics for DARTE Teams.....257

# CHAPTER I

## INTRODUCTION: PURPOSE AND CONTEXT OF THE STUDY

### Purpose

In recent years, drug abuse among youth has become an urgent national concern, and there have been a variety of responses to the issue. One development has been a variety of drug education programs to encourage youth not to abuse drugs. DARTE (Drug Abuse Reduction through Education) is one such large-scale, prevention-oriented program. Through DARTE, teams of students, teachers, administrators, and other personnel from 28 Detroit-area school districts were trained to return to their home school districts and carry out drug education programs.

By 1973 the view that most efforts in the area of drug education were dismal failures was rather widespread (Horst and BenDor, 1973; De Lone, 1972). However, DARTE seemed to have a number of innovative aspects -- a team approach, a focus on alternatives to drugs, and an emphasis on interpersonal relations -- which made it worthy of study. In addition to DARTE's apparent potential as a constructive approach to drug education, the program raised a number of interesting social psychological questions. What variables affect the process of socializing volunteer drug educators (and change agents in general)? What factors in individuals, teams, and communities affect the performance of the change agent role? These more general questions seem

applicable to a broad variety of social change programs which involve the work of teams of change agents in a larger institutional and community setting. The purpose of the present study, then, is to explore some of these questions and, more specifically, begin to determine which types of variables are most useful in predicting the success of change agent teams which function in settings similar to DARTE's. The results, though exploratory in nature, should be of both practical and theoretical interest.

## Context

Much of the data on which this dissertation is based was collected for the third of a series of evaluation studies of DARTE in which the author was involved (Des Jarlais and Horst, 1971; Horst, 1972; Horst and BenDor, 1973). The third study was conducted at the Center for Research on Utilization of Scientific Knowledge, Institute for Social Research, The University of Michigan. The author's relationship to DARTE has always been that of an outside consultant. The rest of the staff involved in collecting the data on which this study is based had no experience with DARTE before the summer of 1972.

## Organization

The second chapter will set a context for understanding the DARTE program. First, it will provide a perspective on drug abuse among youth -- some of the reasons for the problem, and some of the typical responses to it. Some of the types

of drug education available will be discussed along with a report on several evaluations of drug education approaches. Finally, the DARTE program itself will be described.

In the third chapter, Theory and Review of Literature, relevant literature will be cited and discussed in terms of its implications for DARTE. First, strategies of change agentry and types of organizations working for social change will be discussed. The concept of DARTE as a socialization agent will be introduced, and then factors expected to influence the outcomes of DARTE training at the individual, team, and community level will be discussed. Hypotheses concerning the effects of variables at all three levels will be developed and explained in terms of previous theoretical concepts and empirical data.

Chapter IV, Method, includes a description of the subjects, the instruments used, and the detailed procedure for data collection. Several of the problems associated with some of the methodology (e.g. interviews) are discussed along with information concerning the reliability and validity of the methods chosen.

The fifth chapter will be a detailed report of the results of this study. It will show how each hypothesis was tested, indicate whether or not each hypothesis was confirmed, and discuss any relevant issues concerning interpretation of the data.

Chapter VI, Discussion, will have three major sections. In the first, overall methodological concerns affecting

interpretation of the study's findings will be considered. In the second, substantive issues arising from each of the three levels of analysis will be discussed. Finally, in the Concluding Comments, some overall conclusions and recommendations will be stated.

# CHAPTER II

## CONTEXT OF THE DARTE PROGRAM

In order to understand how DARTE worked, it is important to understand the context in which it operated. The existing drug problem, the prevailing climate of opinion concerning drug education, and previous drug education efforts in Michigan and Wayne County, are all elements of the total situation to which the DARTE staff responded in designing their program. Each of these areas will be considered briefly before the details of the DARTE approach are described.

### A Perspective on Drug Abuse by Youth

The problem of drug abuse is clearly multi-faceted, ranging from the heroin habit soldiers brought home from the Indochina War, to suburban youth taking "downers," cigarette-induced lung cancer, and automobile accident deaths related to alcohol use. Millions of Americans receive prescriptions for mood-modifying drugs each year. In many ways, drug abuse, both "legal" and illegal, is tied in to our economic system (O'Connor, Wurmser, Brown, and Smith, 1971; Joyce, 1973).

Our society's response to drug abuse has been complicated by several key misunderstandings. One is the lack of a clear distinction between drug use and drug abuse. While most people distinguish between use and abuse of

alcchol, many do not seem to make the same distinction with respect to illegal drugs. Many have regarded any drug use which is not medically prescribed as abuse, ipso facto (Yankelovich, 1975). Irwin (1970) clarifies the issue by defining "abuse" as occurring under any circumstances which significantly increase the hazard potential, whether or not a physician has prescribed the drug.

Secondly, the dissemination of inaccurate descriptions of the risks involved with drugs has often been a problem (Randall, 1974). Irwin (1970) attempts to "make sense out of the enormous and often conflicting information about drugs" (p. 1) by subdividing the hazards of certain drugs as they relate to the individual (e.g., risk of tissue damage) and as they relate to society (e.g., tendency to arouse aggressiveness, legal status). The rank orders on these two dimensions sometimes differ sharply -- for example, cigarettes are of little hazard to society, but considerable hazard to the individual. Irwin also lists the relative hazards of certain drugs to society as rated by a group of 22 law-enforcement personnel. The law-enforcement group rated alcohol seventh, and heroin first. Noting that alcohol is implicated in approximately 50% of driving fatalities and many crimes of violence, Irwin expressed surprise at these ratings. Apparently, heroin's status as an illegal drug confuses the issue of the real risks in terms of total personal and social costs.

Paradoxically, some of the most dangerous drugs in terms of personal risk -- alcohol and cigarettes -- are legal.

A third area of difficulty in our societal response to drug abuse has been a tendency toward alarmism. A good example of this phenomenon was the claim that LSD causes chromosome damage. After many "scare stories" had been published, a dispassionate review in Science (Dishotsky, Loughman, Mogar, and Lipscomb, 1971) concluded that there is no clear evidence for chromosome damage, mutagenic effect, or teratogenic effect from the use of pure LSD.

Johnston's (1973) longitudinal study of youth may help explain some of the great passion stirred by the drug issue. He found a strong relationship between political alienation and the use of marijuana, hallucinogens, and amphetamines (but not other drugs such as cigarettes, alcohol, and heroin). Thus, the use of certain drugs is likely to get caught up in political and life-style conflicts between the generations which obscure the real issue of personal risk from drug taking.

The reasons for drug use are very complex, but one common denominator seems to be a desire to "alter consciousness." Even children do a variety of things to achieve this purpose (twirling until dizzy, deliberately fainting, etc.). According to Weil (1972), many people "fail to distinguish between the method (drug use) and the goal (altered consciousness)" (pp. 85-86). Many people in our society condemn even the goal by labeling it "escapism." Weil

suggests that if we as a society were more accepting of the goal we might be more helpful in encouraging people to find nonchemical ways of altering consciousness.

Finally, Brim (1966) points out that society regards as a threat those whom it perceives as deviant in motivation (vs. ability or knowledge) and values (vs. behavior alone); the drug user would appear to fit this description, and society does appear threatened by him. The resulting desperate search for the "cause" of drug abuse has usually started by focusing on the personal qualities of the abuser. Unfortunately, this approach can lead to "blaming the victim" of a social problem instead of changing societal conditions which may play a large role in bringing about the problem (Caplan and Nelson, 1973). Some writers in this area have become responsive to the social context of drug use or abuse. For instance, Winslow, Hankins, and Strachan (1972) state that drug involvement is a response to an "inadequate" environment. Unfortunately, discussion of the environmental and cultural causes of drug abuse is often at the level of generalization about large-scale social problems. Thus, it is often difficult to discern the specific programmatic implications of such discussions. The proposed solutions to the "underlying" problems may be "uncritically visionary," as a recent review (Randall, 1974) has pointed out.

This information about the drug problem seems to have several implications for any drug education program. 1) It should recognize the complexity of the problem. 2) It should

distinguish clearly between drug use and abuse and disseminate accurate information, not confusing effects related to a drug's legal status with its pharmacological effects. 3) It should provide ways of opening up lines of communication across the generations. 4) It should recognize the legitimacy of the desire for altered states of consciousness and encourage youth to find nonchemical means for accomplishing their purpose (Dohner, 1972). 5) It should not focus all the blame on the drug abuser himself, but should look for social sources of the problem as well.

## Evaluation of Drug Education in General

Recently, awareness of the importance of evaluating drug education approaches and materials has been increasing. By 1972 there had already been such a flood of drug education materials that several agencies in Washington called for a six-month moratorium on new production, so that the process of evaluation could catch up (Behavior Today, November 20, 1972). Two large-scale studies sponsored by the Department of Health, Education, and Welfare were also published that same year and widely discussed. Both studies were very critical of federal government-sponsored efforts at drug education. One concluded: "The government must recognize the validity of the search young people utilize drugs for, even if disapproving of the techniques, or young people will continue to be unmoved by governmental efforts to control drug abuse" (quoted from the study by "Number 9,

Inc.," in Drugs and Drug Abuse Education Newsletter, 1972). Both reports also urged that programs have much input from youth and drop prevention of all drug use as a goal (Behavior Today, November 13, 1972). There was a high degree of convergence in the conclusions of the two reports, which might not have been expected, since their methodologies differed and one was written by Number Nine Youth Crisis Center, a nonprofessional, "counter culture" institution, while the other was produced by Macro Systems, Inc., a professional research consulting organization.

During the same time period, news of Richard Stuart's studies of drug education reached the press (New York Times, December 3, 1972). Junior high school students, exposed to an information-oriented program, tended to increase their reported rate of experimentation with marijuana, alcohol, and LSD, relative to a control group (Stuart, 1974). Although Stuart correctly notes some possible limitations to his data, his study certainly casts doubt upon the efficacy of drug education programs which emphasize information alone.

Dissatisfaction with the existing curriculum guides for drug education has also been expressed. Implicit in the design of such guides is the notion that students all require the same information at the same time. Caliguri (1972) shows how untenable this assumption is by delineating five student positions with respect to drugs: "(1) the abstainers, (2) the curious or experimental-minded, (3) the users, (4) the abusers, and, maybe, (5) the undecided"

(p. 39). He then advocates using different drug education approaches for these subgroups.

In a critical review of the whole drug education scene, DeLone (1972) reverses the usual question, "What can the schools do to prevent drug abuse?" and asks, in effect, "What is it in schools that might be leading students to abuse drugs?" He answers his own question with a list of ills frequently attributed to the schools: failure in teaching basic skills, which leads to a failure syndrome for students; conformity pressures; and a failure to consider noncognitive concerns which preoccupy students -- sexuality, love, belonging, fear of growing up, etc. DeLone suggests a number of approaches to remedy the situation, including providing in-school "sanctuaries" run by students trained in peer counseling, along with encouraging genuinely constructive alternatives to drug abuse.

Is it possible to draw an overall conclusion from these studies and varying perspectives? It is safe to say that there was a general disenchantment with drug education at the time the final evaluation of DARTE (Horst and BenDor, 1973) was undertaken. Information-oriented programs seemed to be particularly negatively viewed.

## Evaluation of Drug Education in Michigan and Wayne County

Since 1955, some form of drug education has been required in the Michigan schools. A common practice has been to add to the curriculum some statements about the deleterious

effects of alcohol, tobacco, and narcotics. Even this little bit of drug education has not been carried out by all districts. A 1970-1971 school year survey (McClendon, 1971) indicated that out of the over 500 school districts (a 90% response rate), 421 had carried out some form of drug education, while 102 had not. "Inservice training" was practiced by 395 districts while 131 did not do it.

To illustrate the range of drug education programs and materials typically available to Wayne County school districts, three different approaches will be described briefly:

1) Project D.R.U.G.S. (Drug Re-Education Utilizing Guidance Services, a Michigan Department of Education Title III project). In this program guidance personnel from 15 Western Wayne County schools were trained in drug abuse counseling. The goal was that counselors establish in-school counseling centers for students and encourage the development of other programs. The project evaluation report attributed some of the nine new drug education programs started in the 15 target districts in that year to the effect of D.R.U.G.S. (Project D.R.U.G.S., 1972).

2) For teachers, the Teacher Resource Guide for Drug Use and Abuse for Michigan's Schools (Michigan Department of Education, 1970) is available. It is largely informational in its approach. Some 30,000 copies were originally produced, and copies were sent to all school districts in the state.

3) The Social Seminar (National Institute of Mental Health, 1971) is an integrated program of films, discussion guides, a programmed text, and instructions for a simulation of a "community at the crossroads" with respect to drug abuse. The present Project Director of DARTE (Kenneth Kaminsky) reports that in the 1974-5 school year each of the films was used over 40 times.

Some evaluation of programs in Michigan has been carried out. Sakamoto (1971) studied programs in large high schools (2,000 or more students) by conducting structured interviews with top administrators in 23 schools. He concluded that the key areas of weakness in most Michigan programs were: inadequate in-service training and evaluation; lack of cooperative programs between school and community; insufficient involvement of representatives from the whole school community; and problems with drug policy (lack of clarity, or tendency to be punitive). A second evaluation report (Michigan Office of Drug Abuse and Alcoholism, 1972) was written after the DARTE program was underway. It compared DARTE and non-DARTE school districts and concluded that school districts having DARTE teams were more likely to: evidence school-community cooperation; have inservice training beyond that provided originally by DARTE; include students in planning efforts; have policies dealing with drug abuse on an individual basis and have student input into those policies; report tangible changes (e.g. modified teaching methods or a new walk-in

center); and state their major program objectives in people-oriented and affective terms. The writer of that report clearly concluded that DARTE was a more adequate program than others available.

In addition, there are several previous evaluations of DARTE in which the author has been involved (Des Jarlais and Horst, 1971; Horst, 1972; Horst and BenDor, 1973). These reports were also generally favorable to DARTE.

The DARTE Program*

DARTE (Drug Abuse Reduction through Education) is a program of the Wayne County Intermediate School District, which encompasses metropolitan Detroit and a number of surrounding communities. Detroit itself is subdivided into eight semi-decentralized "regions" which are counted separately in this study. Communities in the whole area are extraordinarily varied, from urban slums to ethnic white working class suburbs, affluent suburbs, and semi-rural towns. An examination of Census figures reveals very strongly a pattern of racial segregation in housing (and therefore schools).** If a community has any significant proportion of blacks, it seems to have a majority of blacks.

At the time the data reported in this study were collected, the DARTE program had been in operation for about 26 months, with an annual budget of $125,000. This sum

*A fuller description of the DARTE program may be found in Horst and BenDor (1973).

**figures from the 1970 U.S. Census provided by DARTE

supported two staff members, two secretaries, and the rest of DARTE's operating expenses. The main source of funding was the Office of Criminal Justice Programs of the State of Michigan. The stated overall purposes of DARTE were to slow down the misuse of drugs, especially those which produce physical or psychological dependency, and to encourage youth to make responsible decisions concerning their own lives. With these goals, DARTE provided the main thrust of drug education activities in Wayne County during the time covered by this study.

The core of DARTE work has been the training of Leadership Teams, which are the focus of this study. Twenty-eight school districts were represented by teams composed of students, teachers, administrators, counselors, social workers, and others. The exact combination of people varied, although students and teachers were always included. An average of four teams per training cycle received a 30-35 hour training program emphasizing accurate information about drugs, team-building, alternatives to drug abuse, and action planning for "back-home" drug education programs. The training schedule varied from a half day once a week for ten weeks, to five straight days during the summer. The first seven training cycles (completed between the fall of 1970 and the spring of 1972) included the 28 school districts studied here.

The design of the leadership training evolved over time. In the first cycle there were a fairly large number

of relatively "passive" activities (e.g., films, information on pharmacology, lectures by representatives from the Governor's office, etc.), although DARTE has always emphasized alternatives to drugs and providing time for action planning. By the seventh training cycle the design outline was as follows:

Day 1: Legal information about drugs; communications activities (described below); action planning (described below).

Day 2: Pharmacology; identification of school district needs; action planning.

Day 3: Values clarification (described below); action planning.

Day 4: Demonstrations of yoga and Tai Chi Chuan (alternatives to drugs); movie; and action planning.

Day 5: Team planning to present action plans to mock "School Board;" session on games and role-playing strategies; and presentation of action plans.

Several aspects of the training require further description. A primary goal of DARTE's training is that the teams develop an "action plan" for drug education activities. Each plan should be tailor-made by the team to be appropriate to local problems, needs, and resources. A series of structured exercises is used to help the teams in developing their plans. On the last training day, team members role-play presenting their action plans to a mock "School Board,"

to help prepare them for the real experience of seeking School Board approval for their work.

"Values clarification" denotes a method by which participants can experience making deliberate choices and elaborating their positions on value-laden issues. The use of Values Clarification techniques is becoming increasingly widespread in educational settings (Kirschenbaum and Simon, 1973).

"Communications activities" is a catch-all term referring to various structured individual and group exercises through which people can learn to be more open and honest with each other. DARTE sees the use of such exercises as helpful in the team-building process. Over time, DARTE has developed and disseminated a variety of values clarification and communications materials (e.g. DARTE, 1971; Wessels, Alexander, Coleman, Hoffmann, Karwacki, 1972).

After the training period, DARTE has made an effort to stay in contact with teams. DARTE staff members have occasionally participated in the second-level training initiated by the DARTE school district teams. In the earlier stages of the program, follow-up seemed to be left to the teams to initiate and much of that contact was informal. More recently, the DARTE staff has been more active in initiating follow-up contacts. For instance, in November, 1972, DARTE convened a meeting for all the team leaders working at that time. The leaders shared experiences with each other and made recommendations to the DARTE staff.

The group concluded that more guidance should be provided on "how to plan" and on running workshops.

DARTE has made an effort to involve previously trained people as resources for later work. For instance, several students trained in one cycle worked with the DARTE staff for the next cycle; a group of DARTE participants received extra training in values clarification techniques; and two leaders of previously successful DARTE teams shared their experiences with participants in a later cycle. These procedures would appear to help ensure continuing input from past participants and increase the skilled resources available in the community.

DARTE can appropriately be regarded as an effort at planned change (Lippitt, Watson, and Westley, 1958; Bennis, Benne and Chin, 1961) with several discernible goals, the attainment of which could be assessed. Achievement of the long-range goal -- reduction of drug abuse among Wayne County youth -- would be exceedingly costly and difficult to measure; it would be impossible to assess in the present study. However, DARTE had some intermediate and short term goals as well. The emphasis on nontraditional teaching strategies (e.g. role-playing, values clarification) suggests that one of DARTE's intermediate range goals was to help bring about positive changes in the educational climate of the Wayne County Schools. Greater adult-youth communication, encouraged by the inclusion of students on teams, was another apparent goal. Evidence from elsewhere (Johnson, 1972)

suggests that such efforts can help resolve some of the communication difficulties between adults and youth.

Both educational change and increased adult-youth communication were seen by the DARTE staff to be instrumental to their long-term goals. However, the short-range goal of the teams' returning to their home school districts and effectively planning and carrying out appropriate drug education programs was DARTE's immediate concern and is the major focus of this study. Effectiveness for a DARTE team is defined as planning and implementing a substantial number of drug education activities, working together productively as a group, and successfully collaborating with others working on the drug abuse problem. The overriding question for this study is, then: what characteristics of a team and its school district and community setting facilitate its effectiveness? Although the specific data of this paper concern a drug education training program, drug education *per se* is not the central concern of this study. The social psychological principles involved should be generalizable to other types of programs.

On the other hand, the review in this chapter of the current status of the drug problem, evaluations of drug education, and previous programs in Michigan and Wayne County, has shown that the DARTE program contains a number of the approaches deemed potentially useful. Among these are: adult-youth collaboration, a focus on alternatives to drugs, and a concern with the interpersonal and social

context of drug use and abuse. If this study successfully identifies key factors related to team success, then it may be of practical as well as theoretical relevance.

In the next chapter a number of theoretical perspectives on the processes of training (which is a type of socialization), team development, and the functioning of change agents in a community context will be examined. Both theoretical and empirical material will be used in deriving predictions about the factors leading to success or failure of change agent teams which work in complex organizational and community settings.

# CHAPTER III

## THEORY AND REVIEW OF LITERATURE

### Introduction

In its training, DARTE attempted to help participants become drug educators, adding a new role to whatever role they ordinarily played in the school system (student, teacher, administrator, etc.). Factors affecting team members' capacity to enact the "drug educator" role successfully may be seen as operating on three different levels. The first level is the individual him or herself. Characteristics of age, sex, status in the school system, or personality may all affect one's potential as a drug educator. DARTE's primary effect at this level may be conceptualized as that of a socializing agent. At the next level, that of the school district team, the forces of small group dynamics become relevant and may seriously affect the role enactment. Finally, at the most complex level, the team is trying to function as a change agent in its larger social context. The school district administration and certain characteristics of the community at large can be expected to affect the ability of the team members to carry out their new roles successfully. In this study, predictions will be derived for variables at all three levels of analysis. Ideally, it should then be possible to compare the relative efficacy of the variables in predicting program outcome. The degree to which this goal

can be achieved will be limited both by gaps in existing theory and methodological complications in the available data.

Before focusing on the specific issues at the individual, team, and school district/community levels, it is appropriate to set the DARTE program in the context of some relevant social psychological literature, in order to understand the set of problems facing DARTE in its work. DARTE may be viewed both as a change agent and as a socialization organization. Each of these perspectives on DARTE will be considered before the derivation of the hypotheses tested in this study.

## DARTE as a Change Agent

Clearly, DARTE is a change agent whose target population is the whole Wayne County area. The program was designed so that DARTE teams would function as change agents in their respective communities. This discussion will focus on the characteristics of DARTE's strategies for bringing about change and a comparison of DARTE with social movements.

### Strategies for Change

Kotler (1972) outlines three major approaches: coercion, persuasion, and education (or re-education). In order for coercion to work, it would be necessary for the change agent to have some real power over the targets of change, which neither DARTE nor any of the individual teams

had. Furthermore, as Kelman (1969) has suggested, influence by coercion ("compliance," for Kelman) requires continued surveillance by the change agent in order for the desired behavior to be maintained. (DARTE, by contrast, wanted the teams to be able to function quite independently after training.) The same is true when one considers that DARTE had little power to control reinforcement contingencies for the teams (or, again, the teams for their school districts). Thus, DARTE's basis of social power could not be either reward power or coercive power (French and Raven, 1960).

A persuasive strategy works through finding arguments showing that the desired behavior serves the interests of those who are the change target (Kotler, 1972, p. 183). In a re-educative strategy, the change agent is attempting to bring about the desired behavior by helping the change target to internalize new values. Thus it seems that DARTE used a combination of these two strategies in training its teams, and expected that the teams would do the same in training others.

Chin and Benne (1969) identify three major change strategies which are similar to Kotler's: empirical-rational, normative-re-educative, and power-coercive; but they also provide a list of techniques associated with each strategy. Power-coercive techniques (e.g. nonviolent protest, the use of political institutions, and manipulating power elites) are once again largely inapplicable to DARTE.

Techniques associated with the empirical-rational viewpoint include knowledge dissemination, systems analysis, and the clarification of language. DARTE's strategy may be characterized as empirical-rational in that it does include disseminating accurate information about drugs. In fact, the majority of drug education programs seem to have stressed a knowledge-oriented approach (Dembo and Miran, 1975 ). However, DARTE's primary emphasis would seem to lie in the normative-re-educative approach. The normative-re-educative viewpoint suggests that the source of problems is in the area of attitudes, norms, and relationships in the client system. Like DARTE, this view holds that merely providing new information to the client system is an inadequate strategy. Two major normative-re-educative techniques are: attempting to improve the problem-solving abilities of the client system, and fostering personal growth in the members of the system. The action planning and role playing which are a part of DARTE's training design exemplify the first, while "communications activities" and values clarification are examples of the second type of technique. These approaches are all in the mainstream of the tradition of human relations training with its focus on experiential learning.

Comparison with Social Movements

The term "change agent" encompasses a broad variety of possible organizations and approaches to change. DARTE may more specifically be compared with social movements, which

share with DARTE a goal of ameliorating social problems. Curtis and Zurcher (1974) provide a way of analyzing social movements which is useful in understanding DARTE.

Curtis and Zurcher begin by identifying two major dimensions on which organizations differ: their conditions of membership (exclusive, inclusive, or mixed); and their goal orientations (expressive, instrumental, or mixed). They then go on to discuss some of the: a) incentives, b) types of contact with the environment, c) variations in membership characteristics, and d) leadership styles, of each type of organization, as defined on the two central dimensions. DARTE tends to be inclusive (the standards for membership on a DARTE team are not particularly rigorous) and instrumental (it has aims independent of the direct experience of the members). However, one might make a case for including DARTE in a "mixed" category on both dimensions, since DARTE members must be selected and go through a training period (exclusive membership), and DARTE training includes some emphasis on personal development (expressive goal orientation). DARTE's incentives may generally be described as purposive (vs. solidary); i.e., they appeal to the "suprapersonal" goals of the organization. For DARTE team members this means that the primary incentive would be the accomplishment of drug education rather than such solidary incentives as a sense of group identification or socializing.

DARTE's interaction with the social environment may be expected to be relatively broad, since DARTE and DARTE teams have as part of their task the necessity of dealing with many different groups in their communities. In fact, the degree to which a DARTE team manages to interact productively with other community groups seeking to reduce drug abuse may be seen as one index of the team's effectiveness.

With respect to membership characteristics, DARTE's relatively inclusive requirements (their effort to have diversity among team members) should lead to a heterogeneous membership. Under these conditions, Curtis and Zurcher would expect the style of leadership to be persuasive, vs. the more directive leadership thought to be characteristic of exclusive organizations with homogeneous memberships. (This conclusion is consistent with the persuasive change strategies described above.) DARTE's style of training teams certainly seems to be more persuasive than directive. Since there are 28 different DARTE teams, their individual leadership styles will undoubtedly vary.

Each of the four elements I have described (purposive incentives, broad interaction with the social environment, heterogeneous membership and persuasive leadership style) is said by Curtis and Zurcher (1974) to be associated with inclusive-instrumental organizations. The implication is that these characteristics are associated with proper functioning of such organizations. However, since there are

also exclusive and expressive elements in DARTE's membership provisions and goals, there is a potential for conflict. The implication of this discussion is that DARTE may well have difficulty in accomplishing its rather complex set of goals.

DARTE as a Socialization Organization

In an important review of socialization after childhood, Brim (1966) defines socialization as the "acquisition of the habits, beliefs, attitudes, and motives which enable a person to perform satisfactorily the roles expected of him by society" (p. 5). Inkeles (1969), writing as a sociologist, gives a further definition:

> From the sociological point of view, socialization refers to the process whereby individuals acquire the personal system properties -- the knowledge, skills, attitudes, values, needs, and motivations, cognitive, affective and conative patterns -- which shape their adaptation to the physical and sociocultural setting in which they live. The critical test of the success of the socialization process lies in the ability of the individual to perform well in the statuses -- that is to play the roles -- in which he may later find himself (pp. 615-616).

Both authors point out that in complex and changing societies there will be discontinuities in roles and considerable need for socialization after childhood and for resocialization into new roles. Wheeler (1966) makes a basic distinction between organizations whose primary purpose is developmental socialization and those whose mission is resocialization. The former typically work for some growth-oriented purpose, whereas the latter (e.g. prisons, mental hospitals) typically

deal with socialization failures. DARTE is primarily a developmental socialization organization, in that it is teaching new recruits a growth-enhancing new role. However, there might also be aspects of resocialization, especially for those student recruits who use drugs, as well as for teachers called upon to teach in a new way. The work of individual teams may have even more emphasis on resocialization, since one of their targets is youth who already abuse drugs.

Whether the emphasis is on development or resocialization, any socialization occurs in a context, or setting, which affects the types of socialization practices and the typical outcomes. In characterizing settings for socialization, Wheeler (1966) begins at the most general level by distinguishing between the products of an organization (nonsocial or social) and the degree of the organization's differentiation, or complexity (low or high). In the resulting four-fold classification, DARTE would be placed with most socializing organizations, which have social products and are relatively differentiated. Assuming social objects (people), Wheeler next focuses on the social context of the members. Entering members may be <u>individual</u> (i.e. one person at a time occupying the role) or <u>collective</u> (i.e. two or more members simultaneously occupying the same role). In addition, members may progress in <u>disjunctive</u> or <u>serial</u> fashion (i.e. first occupying a newly-created job vs. doing a job previously held by another person). Wheeler

points out that much of adult socialization occurs in collective-serial settings; universities and training centers are familiar examples. On the other hand, DARTE, though clearly collective, is predominantly disjunctive. There were seven training cycles in DARTE, but since each team was from a different school district, members of later cycles had little access to those who had preceded them.* One could say that new recruits in a disjunctive setting have to "invent" the new role. Wheeler suggests that collective-disjunctive settings like DARTE are particularly well-suited to innovation, and Miles (1964a) makes the same point quite persuasively in his treatment of temporary systems, which are also collective-disjunctive.

Before entering a socialization setting, a new recruit will typically have a period of anticipatory socialization (Merton, 1957) during which he or she is getting ready to take on the new role. Wheeler (1966) believes that a formal period of anticipatory socialization (in the form of orientation programs, etc.) may be particularly necessary when membership requires some new and difficult behaviors. In some ways, DARTE seems to fit this description. To be successful, team members were required to learn to work collaboratively in an inter-generational group and to carry out a new style of education in a controversial area. Thus,

*DARTE may have recognized this disjunctiveness as a problem when it made a few efforts to include previously-trained people as staff in later training sessions.

the role of anticipatory socialization is probably important for DARTE.*

Wheeler (1966) also points out that socialization organizations vary greatly in the amount of control they have over the selection of recruits and in the amount of information they have concerning their new members. Presumably the organization's job is made easier when it has this sort of control over its membership; it could design socialization procedures tailor-made to meet individual needs. DARTE had little prior information concerning its new trainees, since recruitment of teams was left to individual school districts. It is likely that some people were placed on teams only semi-voluntarily, because their job title seemed to require their participation, while others (particularly some students) may have sought out membership eagerly and considered it an honor. Thus, the level of commitment among members is likely to have varied greatly, and with it, the effectiveness of DARTE's socialization effort.

Putting together his own focus on socialization settings and Brim's (1966) perspective on the individual socializee, Wheeler (1966) provides a schema within which to examine socialization in organizations.

*After the period covered by this study, DARTE started having pretraining orientation sessions for new team members. (Demak, Personal Communication).

| | | Intervening Mechanisms | | |
|---|---|---|---|---|
| | | Organizational | Individual | |
| Independent Variables → | Norms | Capacity to present clear norms | Capacity to learn the norms | ← Socialization Outcomes |
| | Performances | Capacity to provide performances opportunities | Capacity to perform | |
| | Rewards, Sanctions, Motives | Capacity to selectively reward performance | Motivation to perform | |

Figure One: Framework for Analysis of Socialization in Organizations (Wheeler, 1966, p. 112).*

For any social role there are associated norms, expected performances, and motivating factors. These are Wheeler's independent variables. There are also intervening mechanisms on the organizational level, for instance, a "capacity to provide performance opportunities," and on the individual level, e.g., possession of the basic abilities to perform the role. The outcome of the socialization process, then, is the performance of the role. A similar path can be traced for learning the appropriate norms and developing the motivation to perform in accordance with the requirements

*The figure is reproduced here exactly as shown in Wheeler. It would seem clearer, however, if the arrows on the right side were pointing toward "Socialization Outcomes."

of the new role. In the ideal study it would be possible to assess each of the six intervening processes and thus have very precise ways of predicting the success of various socializing organizations (or subgroups within an organization, like the DARTE teams). In the present study it will be possible to assess only some of these factors.

At this point, it is appropriate to stop and summarize the information gained from viewing DARTE first as a change agent and then as a socializing organization. The major generalization that emerges is that DARTE is relatively low on several of the dimensions which seem to be related to what might be called socialization "efficacy," or the degree of leverage a socialization agent has over its recruits. For instance, DARTE has little control over the selection of its recruits and little real power over what the participants do after training. Thus, it might be expected that the overall effects of DARTE's socialization will be modest in scope.

In the rest of this chapter, specific hypotheses at the individual, team, and community levels of analysis will be developed and presented. Hypotheses will be underscored, for emphasis, and all of them will be restated at the end of the chapter.

## Individual Level of Analysis

At the individual level the eight hypotheses are in two groups of four. The first set concerns the relationship

between DARTE and the team members, while the second focuses on individual differences among socializees.

Perceived Characteristics of DARTE as a Socializing Agent

Though focused on children, Clausen's (1968) review of the characteristics of socialization agents and their relationships to those being socialized is particularly useful.

Of the eight most important properties of agent-inductee relationships listed by Clausen, four are particularly relevant to DARTE:

1) Affectivity, nature of the emotional tie:
   a) Loving-hostile (accepting-rejecting)
   b) Emotionally involved-affectively neutral
2) Consonance, congruence, or resonance of the goals of agent and inductee in the relationship generally and in regard to specific socialization aims.
3) Interpersonal skills of both parties and the clarity of communication between them.
4) Group and contextual supports for or in opposition to agent's aims and methods (normative solidarity versus alienation, subterranean values, conflict orientation). (Clausen, 1968, p. 149)

Conventional wisdom as well as empirical research (e.g. Baudura and Walters, 1963) supports the notion that socialization will be more effective in the context of a positive relationship (#1, above). Although most obvious in parent-child relations, this generalization should also apply in situations of lower affective intensity such as DARTE. Thus one would predict that DARTE team members who have positive feelings about DARTE will be more effectively

socialized and thus show more effective enactment of their role as drug educators (Hypothesis 1).

The degree of consonance of the goals (and, presumably, values) of the agent and inductee (#2, above) is likely to vary greatly across teams. For instance, teachers who are generally authoritarian in their dealings with students would probably have some disagreement with DARTE's apparent goal of having team members work in a relatively egalitarian way. DARTE's view of student drug use seems relatively "liberal," and team members whose ideal solution to the problem is to step up enforcement efforts are likely to find themselves in value conflict. It seems reasonable to predict that teams whose members have a greater degree of value congruence with DARTE would be more susceptible to DARTE's socialization influence and thus more effective in accomplishing drug education, especially when their approaches are modeled after DARTE's (Hypothesis 2).

As noted earlier, the importance of interpersonal skills and good communication (#3, above) is generally assumed in much of the literature on planned change. This factor would seem particularly crucial for DARTE teams whose members are challenged with difficult and innovative tasks for which they probably have few precedents in their own experience. Since these variables operate on the team level, specific hypotheses concerning them will be included

in the discussion of team level variables, below (Hypotheses 9 and 10).

Finally, there is the support or opposition to the agent's goals provided by the context in which the team works (#4, above). The political conservatism of a community, or the degree of resistance to educational change present in the school district administration are instances of opposition to the agent's goals. A somewhat different example might be a student drug user "subculture" with values contrary to DARTE's. At this point a general suggestion that when the contextual factors are supportive a team will be able to accomplish more drug education seems warranted. Specific hypotheses concerning the community context of DARTE will be discussed later in this chapter (See Hypotheses 14-16).

The attitude change and social influence literatures point toward other characteristics of the socializing agent which are likely to relate to the agent's effectiveness (see, for instance, McGuire, 1968). Doob (1968) points out that a socializee is more likely to accept influence from people who are seen as important and competent. Research has long pointed to the particular importance of the agent's credibility in determining the degree to which his influence attempts will be accepted (Hovland and Weiss, 1952). Although the experimental social influence and attitude change research paradigms are somewhat different from those in the present study, it would still be expected that the

credibility of DARTE would be positively related to the outcome of its socialization efforts. Team members who believe DARTE is credible (the information it provides is accurate) should accept DARTE's influence more and be able to make better use of DARTE's resources than those who do not (Hypothesis 3). At least two recent studies (Smart, 1972; Pascale and Streit, 1972) have confirmed the relevance of the credibility factor in drug education programs.

Knowledge and Attitude Change

In the discussion thus far, socialization has been employed as an intervening variable. Certain factors (independent variables) have been said to lead to effective socialization (intervening variable), which in turn is related to successful accomplishment of drug education activities by the DARTE team (dependent variable). This conceptualization requires a way of measuring the degree of socialization which is independent of the team's accomplishment.

Attitude change is often used as a measure of the effectiveness of a socialization effort. In an extensive review of attitude change, McGuire (1968) breaks down that process into five stages: attention, comprehension, yielding, retention, and action. The completion of the attitude change process is indicated by the presence of each of these component parts. The same may be said of socialization; in order to be socialized, one must attend to the socializing agent, comprehend the message that is being

conveyed, yield to the message in some way (be receptive to it), retain the contents of the socialization process and, finally, act accordingly. The action stage is represented in the present study by the dependent variable of team accomplishment. But the first four stages are all part of the intervening variable itself. Opinion and knowledge change, which are often used to study the outcomes of drug education programs (e.g. Swisher, Warner, and Herr, 1972), would seem to be good measures of the intervening variable of socialization. Typically, opinion and attitude change are treated as dependent variables. In this study, I will employ them as intervening variables, both seeking to predict them by use of independent variables, and in turn using opinion change (in directions favored by DARTE) and increases in knowledge about drugs as indices of socialization and thus as predictors of successful team enactment of the drug educator role.

Referring to Wheeler's schema introduced above (in Figure One), opinion and attitude change represent the "capacity to present clear norms" of DARTE and the "capacity to learn the norms" of the DARTE team members. It is appropriate at this point to review briefly some of the findings concerning opinion and knowledge change as indicators of the effectiveness of drug education programs.

Swisher, Warner, and Herr (1972) compared four different strategies of drug abuse prevention in ninth and eleventh graders. For all four approaches, student knowledge

increased significantly but attitudes and self-reported drug use were unaffected. In an earlier study of the DARTE program, Horst and BenDor (1973) reported that both adults and students showed desirable changes in both opinions and attitudes from the beginning to the end of the DARTE training period. Leary (1973) reported on a study in which leadership teams received training to return to their local communities and do drug education -- a design quite similar to DARTE's. He found no relationship between participants' cognitive mastery of the workshop material and their later affective attitude toward certain concepts about drug abuse. These studies indicate that knowledge and opinion changes do occur as a result of drug education but are not always correlated and should be treated as separate indices of socialization.

A study by DesJarlais (1971) resembles the present research in that changes in knowledge and "concerns" (attitudes) were studied along with the perceived characteristics of the socializing agents in a drug education program. As in the present study, knowledge acquisition and attitude change were treated as indices of socialization, although in the Des Jarlais study the two variables were treated as dependent rather than intervening. Interestingly, the pattern of findings differed for the two major age groups in the study, with expertise being more impressive for the adults and the effect of peers more important for the youths.

Further consideration of attitude and opinion change data will be found with the discussion of individual differences in socializees. A tentative hypothesis at this stage is that desirable knowledge and opinion changes indicate successful socialization and will thus be predictive of drug education accomplishment by the DARTE teams (Hypothesis 4).

## Individual Differences in Socializees

There is a long tradition of research on individual differences in susceptibility to socialization of various kinds. Although individual differences are not a major focus of this study, there are some factors which are of concern here. So far, the unit of analysis has been the school district team, because the teams' success has been the primary dependent variable. For the next four hypotheses, however, the unit of analysis will be the individual, and knowledge and opinion change scores will be the dependent variables. Two major individual difference variables will be considered: age (adult vs. student) and sex.

### Age Differences

Several studies lead to the prediction that adults and students will differ in their response to DARTE as a socializing agent and therefore in their opinion and knowledge change during training. Pascale and Streit (1972), in the study referred to earlier, studied the perceived credibility of a variety of sources of information about drugs for three different age groups (a cross-sectional

sample of junior high, senior high, and college youth). The reported credibility of parents, law-enforcement officials, teachers or counselors, and religious leaders went down significantly as the students got older. The credibility of older siblings did not differ across the age groups, but the role of peers and drug users was significantly greater for the older students. Thus, one would expect that DARTE, whose staff consisted of adult school district personnel, would be seen as less credible by the student than by the adult participants. This expectation is reinforced by McClintock's (1973) finding that school adults in general play a rather small role in adolescent socialization. The likely result is that students would display less knowledge and opinion change than adults.

Clausen's (1968) suggestion that differences in "subterranean" values may reduce the effect of socialization agents is also relevant. Drug users have been shown to reject anti-drug information (from both "user" and "nonuser" sources) more than drug nonusers (Smart, 1972). Going on the assumption that there were more drug users among the student than adult DARTE participants, Smart's findings and Clausen's suggestion would provide further support for the expectation that students would be less influenced by DARTE and display less knowledge and opinion change (Hypothesis 5). For similar reasons, one would predict that adult attitudes toward DARTE training would in general be more favorable than student attitudes (Hypothesis 6).

In discussing knowledge and attitude change, it is important also to consider the absolute level of knowledge and attitudes at the outset of any change effort. Pretest levels need to be accounted for in analyzing possible changes during training. While one might think that students would know more about drugs than adults, the data do not seem to bear out that assumption. For instance, Ognibene and Riccio (1973) found that high school counselors knew more about drugs than students. Earlier studies on DARTE (Des Jarlais and Horst, 1971; Horst, 1972) found the adults both more knowledgeable and sophisticated in their attitudes about drug abuse than students. However, at least one study concluded that users knew more about drugs than nonusers (McKee, 1973), in a sample where more students than adults were users. The resolution for these seemingly contradictory results probably lies in the fact that McKee's sample was closer to a cross-section of the adult community than the high school counselors and others interested in conducting drug education programs who made up the adult sample in the other studies.

Sex Differences

Beyond the generally accepted finding of a higher rate of drug use among males than among females (Roth, 1972), sex differences have been little researched in the context of drug education. However, there are at least two ways in which this issue could be relevant in the present study --

sex differences in influenceability, and differences in reactions to various aspects of DARTE training.

McGuire (1968), in his thorough review of the attitude change literature, concluded that females were generally more susceptible to influence than males, although there was no real uniformity in the data to suggest at what stage in the attitude change process the sex difference might be most effective. More recent reviews (e.g., Maccoby and Jacklin, 1974) cast doubt on the existence of a general sex difference in persuasibility. In the present study, however, the relevant drug education literature leads to a weak prediction that males would demonstrate more opinion and knowledge change than females during the DARTE training period (Hypothesis 7). The reason for contradicting other attitude change research is to be found in Amendolara's (1973) study of seventh graders who received drug education; males demonstrated more attitude change than females. However, in the study discussed earlier, Leary (1973) found no difference in attitudes between his trained and untrained groups based on sex. Altogether, the data in this area are equivocal, and a finding of no sex difference in knowledge and opinion change would not be surprising. Since the conflicting data already cited suggest differing findings for adults and students, it is possible that interaction effects for sex and age will occur.

There does not seem to be any literature focusing on sex differences in response to various aspects of socialization in the context of drug education. However, a recent article by Block (1973) suggests a line of theorizing in this area. She employs two concepts of sex-role originally introduced by David Bakan: agency, and communion:

> Agency is concerned with the organism as an individual and manifests itself in self-protection, self-assertion, and self-expression. Communion, according to Bakan, is descriptive of the individual organism as it exists in some larger organism of which it is a part and manifests itself in the sense of being at one with other organisms (Block, 1973, p. 515).

She then goes on to demonstrate empirically that the socialization emphases preferred by parents of boys concentrated on agency, while those emphasized by parents of girls revolved around communion. "Ideal-self" descriptions for males and females in six countries tended to follow a similar pattern; adjectives classifiable as agentic were chosen more often by males and adjectives classifiable as communion-oriented were chosen more often by females. Altogether, these findings raise the possibility that males might be more responsive to agentic aspects of DARTE's socialization (e.g. action-planning), while females might respond more to communion-oriented aspects (e.g. communications activities). <u>The prediction, then, is that if sex differences in response to DARTE training occur, males will prefer agentic aspects, while females will prefer communion-oriented ones</u> (Hypothesis 8).

Team Level of Analysis

In the literature on planned change, team development plays an important role. Team members must be able to work collaboratively in order to succeed in their tasks (see, for instance, Schindler-Rainman and Lippitt, 1972). Team members need to have acceptance, mutual support, and trust in their relationships with each other (Miles, 1964b; Watson, 1972) in order to maximize the possibility of innovation and reduce resistance to change. Thus, one would predict that teams which show evidence of good working relationships among the members would be more effective and accomplish more drug education activities (Hypothesis 9).

There are numerous factors which could affect the ability of members of a group to work successfully with each other. One of these is that participants may have differing perceptions of each others' positions on key areas of value conflict. People often act on the basis of their attributions about others -- the familiar process of stereotyping. An example of this process is reported by Perry (1974); she first assessed knowledge about and attitudes toward drugs among subjects in three groups -- students, teachers, and administrators. Then she asked participants to indicate their perceptions of the knowledge and attitudes of each of the other two groups. Perry found that students attributed a significantly lower level of drug knowledge to teachers and administrators than they actually had. (In fact the two latter groups scored higher

than the students). On the other hand, the two adult groups attributed more positive attitudes to students than the students held, while the perception by others of administrators' attitudes was more negative than the attitudes really were. These perceptions, so widely at variance with the actual levels of knowledge and attitudes, would seem to guarantee conflict in cross-generational groups working on drug abuse prevention. Real differences between students, teachers, and administrators on these questions do exist (Leary, 1973), but distortions in attribution seem to magnify them. It would seem reasonable to predict that teams in which communication is relatively open might be able to overcome these barriers. Thus, DARTE teams in which communication is more open should accomplish more drug education than others (Hypothesis 10).

For many kinds of groups the role of the leader is recognized as being very important and it has received much attention in the literature (e.g. Golembiewski & Blumberg, 1973). The prevailing view seems to be that somebody -- a designated leader or the group members themselves -- must serve certain leadership functions in order for a group (especially a task-oriented one) to be effective. Much research energy has been expended in trying to discern the characteristics of effective leaders (e.g. Fiedler, 1969), with at best mixed results. At least, it seems safe to predict that DARTE teams which perceive their designated leaders as being effective are likely themselves

to be effective and to accomplish drug education activities (Hypothesis 11).

Miles (1964b) points out that the degree of commitment among members of a group initiating innovation is important to their success. Research in dissonance theory (Brehm and Cohen, 1962) and in self-perception theory (Bem, 1970) underlines the importance of felt commitment to performing an action as it affects one's attitudes and behavior. These different approaches both lead to the same hypothesis: that teams whose members were highly committed to the team's plans for drug education should be the most productive. The same should be true for members' perceptions of the degree of commitment expressed by the team as a whole (Hypothesis 12).

A final consideration at this level concerns the composition of the teams. Miles (1964b), among others, asserts that groups promoting an innovation are more likely to be effective in bringing about change if they have high status or otherwise powerful members. The implication for this study is a prediction that teams which included administrators (the high status people in school districts) would be more likely to accomplish drug education (Hypothesis 13).

## Community Level of Analysis

As Wheeler (1966) points out, any organization or group is "embedded in a broader social system that helps shape its goals, provides both agents and recruits, and

supplies the material resources that sustain it" (p. 99). Many writers in the field of social change (e.g. Carmack, 1965) have pointed to the need for positive community involvement in order for change to be adopted. In this section I will touch upon a few of the factors in the broad context of the school district and the community at large which seem likely to have a substantial impact on the functioning of DARTE teams.

Iscoe (1974) suggests that communities vary in "competence," their capacity to locate, acquire, and utilize on their own behalf the resources which are available. Friedman (1973) concluded that the presence of local organizational resources better predicts a community's success in obtaining aid (for programs to reduce infant mortality) than the community's actual need for aid. In some cases, the presence of appropriate local resources (e.g. a medical school and associated medical personnel) was inversely related to indices of actual community need (infant mortality among nonwhites). The analogous conclusion for DARTE is that there will be no relationship between community need (perceived seriousness of the drug problem) and obtaining help (effectiveness of a DARTE team in carrying out drug education activity) (Hypothesis 14).

One of the most important resources any community can have is money. Iscoe (1974) suggests that middle-class communities are more likely to be "competent" than economically-deprived ones. A number of other resources, e.g. the

availability of a pool of well-educated people, are likely to be associated with high per capita income. In the more specific context of educational innovation, Mort (1964), reviewing studies as far back as the 1930's, concluded that financial and other community factors were sometimes better predictors of acceptance of educational innovation than characteristics of teachers or administrators. Des Jarlais and Horst (1971) suggested that members of middle class communities might have a more problem-solving orientation and more leisure time in which to participate in drug education activities. These three very different sources all suggest a prediction that the higher a community's average income, the more productive its DARTE team will be (Hypothesis 15).

A more direct variable for DARTE teams is institutional support or nonsupport from the school district (as expressed by top-level administrators, the school board, etc.). Writers on social change have frequently emphasized the importance of top-down support in facilitating orderly planned change (Watson, 1972; Rogers, 1973). Willingness to provide funds for innovative programs is an important index of the target system's commitment to change (Miles, 1964b). Horst and BenDor (1973) listed some of the expressions of top-down support for DARTE teams: providing released time for teachers' participation, hearing and funding the team's proposals, and having realistic expectations of the team's performance. In this study it is

reasonable to predict that manifestations of administrative and school board support will be associated with team success, and that the converse will also be true (Hypothesis 16).

## Comparison of the Three Levels of Analysis

It should be evident by now that there is more relevant literature allowing predictions about the potential effectiveness of a DARTE team mediated at the individual than at the team or community level. This state of affairs probably reflects the tendency of psychology to focus on individual level variables. There are even fewer studies which make a systematic comparison of variables at more than one of the levels defined in the present study. However, the concept of such comparisons has, at times, been addressed. For instance, Wheeler (1966) asks: "does a member's commitment or adjustment (to a socialization organization) depend on developments within the setting itself or on developments in the external environment?" (p. 81). For personality theorists, the recent tendency to look toward person x situation interactions as the best predictors of behavior (Bowers, 1973) is a further indication of a developing tendency to look for variables from several levels at once to maximize understanding.

In program evaluation studies it is necessary to examine whether outcomes were associated with program characteristics or with other variables unrelated to the program. For instance, Moos (1975) cites a study of British

probation homes for adolescent boys which found that the boys' behavior was predicted better by the environment to which they returned than by the characteristics of the programs in the probation homes in which they received help. The equivalent expectation for DARTE would be that team success is more related to community level variables than to perceived characteristics of DARTE as a socializing agent or other individual level variables.

Perhaps the single most relevant study was performed by Swezey (1973). He used data from an evaluation of a number of programs to train and place unemployed people in appropriate jobs. The two outcome variables were the percentage of people completing each training course and the percentage of people placed in suitable jobs. Using stepwise multiple regression techniques, Swezey demonstrated that several program characteristics (e.g. duration, absence of objections from neighbors, availability of counseling) were superior to a number of individual characteristics (e.g. IQ, previous employment history) in predicting both outcome variables. Together, the studies reviewed in this section reinforce a prediction that team and community level variables may be better predictors of team success than individual level variables (Hypothesis 17).

## Restatement of Hypotheses

In this last section I will restate the hypotheses developed in this chapter, in order of their occurrence.

Individual Level

1) There will be a positive relationship between positive affect toward DARTE and team accomplishment.

2) Congruence in values between DARTE and team members will be associated with team success.

3) Teams whose members believe DARTE's information about drugs and drug abuse to be accurate (and thus perceive DARTE as credible) will be able to carry out drug education programs with more success than others.

4) Teams' desirable changes in knowledge and opinions about drugs will be associated with more effective performance.

5) Adults will demonstrate more knowledge and opinion change during training than will students, even if they start out knowing more and being more congruent with "ideal" value positions for drug educators.

6) Adults' attitudes toward DARTE training and programs will in general be more favorable than students'.

7) The prediction concerning sex differences in knowledge and opinion change (as indices of influenceability) is weak; if a difference occurs, males will show greater influenceability.

8) If sex differences in the perception of the DARTE program occur, females will favor "communion-oriented" aspects while males will prefer "agentic" ones.

Team Level

9) In general, positive team development will be

associated with effective team accomplishment.

10) The greater the openness of communication among team members, the more the team will be able to accomplish.

11) The greater the perceived effectiveness of its team leader, the more drug education a team will accomplish.

12) High personal and perceived team commitment to the plans for drug education activities will be related to a high degree of success in carrying out those activities.

13) Teams which have some high status members will be able to accomplish more.

Community Level

14) There will be no relationship between a team's perception of the severity of the community's drug problem and its ability to carry out drug education activities.

15) The higher the income level of a team's community, the more drug education it will be able to accomplish.

16) Team success will be associated with top-down support (from administrators, school boards, etc.) and the reverse will be true as well.

Comparison of Levels of Analysis

17) Individual level variables will be less successful predictors of team outcome than will team and community level variables.

# CHAPTER IV

# METHOD

In the first section of this chapter the subjects will be described and the processes by which they were selected and recruited for participation explained. In the two following sections the research instruments (questionnaires, interview) and the procedures employed for each will be described. The material concerning the interview includes a consideration of the reasons for choosing a telephone interview, a discussion of questions concerning the reliability and validity of the interview method, and a description of the recruiting and training of interviewers and the detailed interview procedure. The data obtained after the initial period of data collection will be described, followed by a consideration of some methodological issues raised by this study. Finally, the overall approach to analyzing the data will be explained.

## Subjects

### Characteristics

The subjects of this study were a subsample of DARTE team members who received training between December, 1970, and May, 1972. They represented 28 different school districts and seven different training cycles. The 146 people in the interview sample (further explained below) included 64 males and 82 females. There were 42 students, 45 teachers,

18 administrators, 12 counselors, 5 parents, 3 nurses, 16 social workers, and 5 others who did not fit into the categories listed above. Twenty-seven of the interviewees were the leaders of their team.

Of the 162 in the questionnaire sample (further explained below) 87 were female and 66 were male,* including 69 students, 34 teachers, 6 administrators, 11 counselors, 4 parents, 3 nurses, 13 social workers, and 5 others.** Seventy-eight people were in both interview and questionnaire samples.

Selection and Recruiting

The DARTE office provided the research group with rosters for the teams as of fall, 1972; these lists were used to select subjects. The number of members on the original team rosters ranged from 5 to 21.

Considering both the time available and the actual numbers of active team members, a goal of 6 interviewees per school district team was set. The actual achieved number of interviews ranged from three to six (22 of 28 districts had five or six complete interviews). Of these six interviewees, the team leader was always to be included (in all, 27 out of 28 were interviewed). This decision was made because it was felt that the team leader would be the best-informed member of the team. The team leader was asked to

*For the 9 cases not specified here the respondent's sex could not be ascertained from DARTE's records.

**For the 17 cases not specified here the role group could not be ascertained from DARTE's records.

designate another team member whom he/she judged to be particularly well-informed about the team's activities. Two students were included where possible, to assure that the viewpoint of students would be represented. Given these requirements, a random subject selection procedure was clearly inapplicable. Instead, the sample was chosen essentially by stratifying within occupational groups (students, teachers, administrators, etc.). The size of the sample relative to the team population varied substantially. Indeed, in a number of cases, the interview sample was the presently functioning team, in part because turnover and dropout from the time of training were high in some communities.

The team leader was contacted first by a letter from the ISR staff, with a covering letter from DARTE, requesting his or her participation (see Appendix A). Shortly thereafter, a telephone call was made in order to confirm participation and set a time for the interview. The team leader was requested to make corrections on the team roster, provide the name of a second informant, and fill out and return the Activity Questionnaire(s) (explained below) before the interview date. Then other members of the team were contacted, up to the maximum of six.

All participants were assured of the confidentiality of their replies -- that neither their names nor the name of their school district would appear in reports of the study. In response, interviewees were generally cooperative

and seemed to give open, thoughtful, and carefully considered answers. There were about three* instances of outright refusal to participate, and about two* people repeatedly were unavailable at the scheduled time; all told, the noncompletion rate was quite low.

## Research Instruments

### Drug Knowledge Inventory (see Appendix B)

In its present form, the Drug Knowledge Inventory is a twenty item multiple choice test with questions concerning drug names and effects, characteristics of drug abusers, the scope of the drug problem, etc. It was adapted by DARTE from a longer questionnaire by McHugh (1969), because the DARTE staff considered the 35 item version too long. Previous experience with the longer test (Des Jarlais, 1971b) and the opinions of the DARTE staff determined the selection of the 20 retained items.

Available evidence suggests that the Drug Knowledge Inventory is a satisfactory measurement instrument. Fiman, Maxwell, and Cohn (1974) found an internal consistency correlation of .75 from the KR-20 formula, for a 25 item version of the test. Bernstein (1974), using data from the present study, supplemented by additional data collected more recently, concluded that the 20 item version also showed satisfactory internal consistency while sampling a broad range of content. His criterion group comparisons

*The precise numbers of these occurrences are not known, since they were not recorded exactly by interviewers.

of nurses and social workers with other occupational role groups also lent some support for the test's construct validity.

Drug Education Opinion Inventory (see Appendix C)

On this instrument respondents indicate their degree of agreement or disagreement (on a five point Likert-type scale) with twenty statements concerning properties of drugs, reasons for drug abuse, strategies for drug abuse prevention, etc. The present inventory (hereafter called the Opinion Inventory) is a shortened form of a 66 item version with a 7 point Likert scale which was in use during the first three DARTE training cycles. DARTE staff chose the twenty items to be used based on their experience with the longer version and data from an earlier evaluation report (Des Jarlais and Horst, 1971). Details of the process of shortening the Opinion Inventory and processing the data from the first three training cycles to make them compatible with data from the later training cycles are described in an earlier report (Horst, 1972). Bernstein's (1974) detailed study of the Opinion Inventory led him to conclude that it, like the Drug Knowledge Inventory, is an adequate instrument for its purposes.

As both the Drug Knowledge Inventory and the Opinion Inventory have been in use since DARTE's inception, the ISR research group had no role in their original development.

Activity Questionnaire

In an attempt to gather quantitative data on the nature

of the activities carried out by DARTE teams, an "Activity Questionnaire" (see Appendix D) was designed for this study. Among the areas covered were: the relative emphases on various drug education approaches (e.g. teaching facts about drugs, values clarification); numbers of participants in planning and executing the program, the target population, methods used, and reasons for program success/failure. Team leaders were requested to fill out one of these questionnaires for each activity conducted by the team because team leaders were seen as being in the best position to provide this information.

Interview

In an earlier evaluation study (Des Jarlais and Horst, 1971), a semi-structured interview was used to gain information concerning participants' perceptions of DARTE, the teams' activities, etc. On the basis of data from that experience, extensive discussions with the DARTE staff, and a developing understanding of variables crucial to drug education implementation, a structured interview was designed for the present study (see Appendix E). The areas covered include: some background material about the interviewee, team formation and development, evaluation of training provided by DARTE, drug education activities carried out, characteristics of the drug problem in the community, and impact of the program on the schools and on the community. There were two slightly different forms of the interview. The "informant" interview was used for the team leader and

the second person designated by him/her. The "respondent" interview, identical to the first except that questions 8, 20, 21, 32, and 33 were omitted, was used for all other subjects. The five questions shown were asked of team leaders only in an effort to keep total interview time down, and because they tapped relatively "factual" areas in which two responses could be sufficient to describe the team accurately.

Interview questions were written carefully to reduce ambiguities and to make them comprehensible to a very heterogeneous group of respondents. Although no formal pretesting was carried out,* the process of training the interviewers (described in detail below) assured that the questions were reviewed many times and were well understood by the interviewers themselves. Since the interviewers role-played the interviews with each other, senior research staff, and the DARTE staff, there was further support for the belief that the interview questions were readily comprehensible. In fact, during the actual interviews, subjects seemed to comprehend and be able to answer the questions.

There are both advantages and liabilities to open-ended and fixed alternative formats for interview questions. Open-ended responses may be "richer" and provide the best

*The interview in the first study (Des Jarlais and Horst, 1971) was sufficiently different from the one in the present study that it cannot be considered a real pretest, although the content areas did overlap and some of the open-ended questions were quite similar.

index of the interviewee's viewpoint, with minimum structuring or interference by the interviewer. On the other hand, such responses are difficult to quantify and, thus, to compare systematically. Fixed alternative responses often give little "feel" for the subject's complex opinion on a matter. A "yes" or "no" may really be "sometimes yes, sometimes no, depending on the conditions at the time;" one person's "4" on a five-point scale may mean something different for him than for someone else. But fixed alternative answers are readily quantifiable. Both open-ended and fixed alternative questions (the latter in the majority) were included in the interview for this study, in an effort to combine the virtues and limit the liabilities of both approaches. Particularly where complex opinions were sought (e.g. a description of factors affecting a team's development), open-ended questions were used. For many other questions, the subject was asked to convey his view on an issue by use of a 5 point response scale with the poles specified.

## Procedure

### Drug Knowledge Inventory and Opinion Inventory

Participants in each of the training cycles were given the Drug Knowledge Inventory and the Opinion Inventory on the first and last days of training. Each participant was assigned a code number so that his/her name was not on the questionnaire. Subjects present at both the pretest and

the post-test comprise the sample for data analysis, since the focus was on change during training. In the first three cycles, because participants were requested to mail in the post-test questionnaires, data were incomplete for many subjects. While 140 people in the first three cycles took the pretest, only 53 returned completed post-tests. Those who completed the post-test did not differ significantly in their pretest knowledge scores from those who did not (Des Jarlais and Horst, 1971). Some differences in pretest Opinion Inventory scores did exist, but were judged relatively unimportant (Des Jarlais and Horst, 1971). This problem did not occur in later cycles, since time was allotted during training for both pretest and post-test. In all cases, the DARTE staff did the distribution and collection of the questionnaires. Control group data were not obtained.

Activity Questionnaires

As described above, team leaders received copies of the Activity Questionnaire in the mail after they agreed to participate in the study. Team leaders were supposed to complete one questionnaire per activity carried out by the team and return them to the interviewer prior to the interview date. The interviewer then went over the Activity Questionnaires and took time during the interview to ask for any needed clarifications.

## Interview

### Choice of Method

An interview (vs. a mail survey) was chosen as the most effective vehicle for data collection in this study. It was anticipated that a mail survey might have unacceptably high nonreturn rates, resulting in samples greatly varying in N's per school district and in representativeness. An interview, by the two-way nature of the interaction, also allows for clarification of questions and answers. In addition, it is easier for a subject to speak his or her answers to open-ended questions rather than write them out (Campbell, 1971). Furthermore, in a comparison of mail survey and telephone interview versions of a study, Northrop and Deniston (1967) concluded that there were few differences in the data obtained.

In deciding whether to use a face-to-face or telephone interview, it is necessary to consider cost in both staff time and travel expense. As Northrop and Deniston (1967) have pointed out, face-to-face interviewing is considerably more costly. Largely for this reason, the telephone interview methodology was chosen. It is well known that the use of telephone subscribers alone has resulted in a biased sample in national surveys (Kegeles, Fink, and Kirscht, 1969). However, the vast majority of our population (DARTE participants) had a telephone number listed on the team rosters provided by DARTE. Sample bias, then, would not result from the selection of telephone subscribers from

this population. Furthermore, the low direct refusal rate (4%) and high final interview completion rate (85%) cited by Kegeles, Fink, and Kirscht (1969) are comparable to those found in the present study. This result indicates that a bias due to nonresponse is not a significant issue in a telephone survey of this type.

The same authors cite several studies, as well as their own, in support of the view that telephone interviews can provide data equally valid as those obtained in face-to-face interviews. Furthermore, Janofsky (1971) was able to conclude that neither sex of interviewer nor mode of interview (face-to-face or telephone) made a significant difference in interviewee self-disclosure. From her study it may be inferred that our subjects were as willing to be honest about their experiences as they would have been in a face-to-face interview.

## Interview Reliability and Validity

An interview is a measuring technique, and its reliability and validity are matters of concern. While a thorough discussion of the pitfalls of interviewing is beyond the scope of this paper, I would like to note a few of the central issues.

No direct evidence regarding repeat reliability of the present interview is available. However, about 20 of the people in the present sample were interviewed in the first DARTE evaluation study conducted during the summer of 1971 (Des Jarlais and Horst, 1971). As noted earlier, the

interview forms were quite different, but some of the same content areas were covered. Comparison of interview protocols suggests that there were no drastic reported inconsistencies in opinion between the earlier and later interviews. However, this consistency over time in subjects does not give us a real test of the interview's reliability.

Cannell and Kahn's (1968) discussion of factors affecting the validity of an interview is very useful. The first factor is accessibility, or the degree to which the information requested is available in the subject's consciousness, is salient to him, and is something he is willing to talk about freely. Salience was usually not a problem, since subjects had all been through the DARTE training and presumably it had some importance for them. However, some of our questions tapped areas in which participants were unsure of their knowledge. The "no answer" option was readily available, and there are some questions, (especially those concerning rates of use for specific drugs), in which 25-30% of the subjects chose not to give an answer. The no answer rate found for these respondents is considerably lower than the 27-60% "don't know" rates for similar questions in a community-wide survey (Einstein, 1972). Hopefully, then, the answers given are the best reflection of the respondents' opinions, where opinions were clearly formed. Finally, the questions asked were not deeply personal or probing, so repression and defensiveness should

have relatively little effect on accessibility in an interview like the present one. On the other hand, it is likely that some team leaders on ineffective teams may have felt threatened by being questioned about team activities.

A second concern is motivation. Our respondents must have been well-motivated in order to agree to spend up to an hour being interviewed. The topic was one with which they had some involvement, and the overall level of concern about drug abuse was high. Therefore, even if a respondent's view of DARTE was negative, he would be likely to willingly respond to an outside evaluation effort which had as an explicit goal the eventual improvement of DARTE's functioning. For this reason, the force of "social desirability" was not all on the side of praising DARTE.

A final consideration in interview validity is cognition, or the participant's clear understanding of the task and of the specific questions. The letters originally sent to the participants (from both the research staff and DARTE) as well as clarifications during the telephone contacts, should have made the straightforward task quite clear. The writing of the interview questions has already been described. Although we have no systematic way of assessing the cognitive factor, interviewers reported no major problems with comprehension of the questions on the part of respondents.

## Recruiting and Training of Interviewers

Four interviewers were hired for purposes of this

study. The two senior interviewers were both women, one in her twenties, the other about forty; both had work experience involving substantial interaction with people. The two younger interview team members (both male) were included because it was felt that they could more easily establish rapport with teenage interviewees. One was an undergraduate social science major; the other was participating through a work program of Ann Arbor Community High School.

Training of the interviewers took place over several days; both the training and the subsequent supervision of the interviewers was done by one of the Assistant Project Directors (Michael BenDor ).* The purpose and background of the evaluation study were discussed in detail, and the interview forms were reviewed thoroughly. The use of the coded sheets for recording responses was demonstrated and the importance of accurate transcribing of open-ended questions was stressed.

A major part of the training consisted of role-playing the interview, from the first telephone contact to completion. Clearly, this approach is one of the most useful for training interviewers (Cannell and Kahn, 1968; Manheimer, Mellinger, Somers and Kleman, 1972). Interviewers practiced the procedure with each other, with senior project staff, and with members of the DARTE staff. In addition,

*The author was the other Assistant Project Director and Ronald O. Lippitt was Project Director at the Institute for Social Research during the period of data collection.

they observed several interviews conducted by the Assistant Project Director and were themselves observed.* Only when the interviewers were judged competent and ready did they start collecting data.

Interview Procedure

In making appointments with the subjects, interviewers stressed that the participant should have adequate free time and be in a comfortable setting, because the interview took up to an hour. Most of the appointments for calls were made in the late afternoon or early evening, when participants were available. One respondent requested and received an in-person interview; all other interviews were conducted by telephone.

Interviewers were provided with a protocol for the initial telephone contacts and for the questions subjects were likely to ask. They followed identical copies of the interview and asked the questions in order. Responses to fixed-alternative questions were recorded on a separate code sheet, while open-ended answers were written out, as near to verbatim as possible, in spaces provided on the code sheets. After the period of training, interviewers seemed to have no difficulty with this procedure.

Interviewer bias is a troublesome problem in social science research (Cannell and Kahn, 1968, pp. 549-552). In this study, since the interviewers did not know about

*This process was possible because one of the telephones used had an amplifier connected to it so that both ends of the conversation could be heard.

DARTE or its approach before the study (and therefore presumably had few preconceived notions about it), a relatively low bias effect may be expected. To the degree that any bias occurred, it may have been slightly negative, since by 1972 the prevailing climate of opinion, at least about traditional drug education, was somewhat skeptical. To mitigate the effect of whatever systematic interview biases may have been present, a strong effort was made to have all the interviewers conduct at least one interview in each school district. The one restriction was that the senior interviewers conducted all the "informant" interviews, while the less experienced staff conducted "respondent" interviews, including the majority of interviews with student participants.

Although the refusal rate was very low, and the final completion rate high, the interview process was not without difficulty. Some participants in early training cycles had complained to DARTE about having their home telephone numbers widely disseminated on the DARTE rosters. For many subjects, therefore, the only available telephone number was the one at their school. Repeated calls were sometimes necessary, and, though almost always successful, this procedure raised the average time per completed interview substantially over the original estimate.

## Collection of Additional Data

### Ratings by the DARTE Director and the ISR Research Group

After the interviews for a given school district were completed, the four interviewers met and discussed the findings for each school district. One or the other of the senior interviewers then wrote a "case study" detailing what happened in each district (see Appendix F). Then the four interviewers and the two Assistant Project Directors (including the author) met and rated each team on the two 1-5 scales elaborated below. Each staff member rated each team separately, and differences were resolved by a discussion which resulted in consensus. Subsequently, and without access either to the case studies or to the I.S.R. group's ratings, the Project Director of DARTE* rated each team on the same two scales. It should be noted that the scales were intended to be used as absolute, rather than relative ratings. In theory, all teams could have received the same rating.

The team development and activities accomplishment scales employed are shown here exactly as they were used. Both of these measures were used because they are conceptually separable and both were considered important.

A. Team Development

5 = Excellent Teamwork

Students and adults were equally represented and had equal influence. Meetings were held regularly,

*Then Leonard S. Demak

with all members notified. All team members report high feelings of openness of communication, collaboration, and ability to resolve student-adult conflict.

4

3 = Effective Teamwork

There was approximately equal representation of students and adults, but some domination of students by adults. Meetings were held regularly, but not all members were notified. Absenteeism and attrition were low. There were high feelings of open communication, etc., but there is more disagreement among respondents.

2

1 = Non-Effective Teamwork

The team did not function as a team. Students were dominated by the adults and/or dropped out. There were low feelings of openness of communication, etc., and high degrees of student-adult conflict.

B. Activities Accomplishment

5 = Good Activity Level

The team carried out a large number of drug education activities. Some included the whole team, utilizing the resources and training of all. These led to the development of more groups interested in carrying out drug education, such as teams within individual schools. Therefore, training was passed on. Ideally, community groups were also involved.

4

3 = Mediocre Activity Level

Some activities were planned and carried out but not as much as above. Activities were conducted by individuals or subgroups instead of the team as a whole. Some DARTE training was passed on to others. Few, if any spin-off organizations were formed, and there was only minimal involvement of community groups.

2

1 = Low Activity Level

> Few or no activities were planned and carried out. Those that were done involved only a few of the DARTE team, and/or were carried out by organizations other than the DARTE team. There were no formal efforts to pass on training and no spin-off organizations.
>
> (Horst and Ben Dor, 1973, pp. V-16-17)

Community Level Data

After the completion of the program evaluation work (Horst and Ben Dor, 1973), additional data concerning communities and school districts were required for use in this dissertation. These data were obtained from reports of the 1970 U. S. Census and statistics compiled by the Wayne County Intermediate School district (e.g. per pupil expenditures, level of state aid per district). The DARTE Director provided some of the necessary documents.

Modes of Data Analysis

After the quantitative data were collected, they were coded, keypunched, and analyzed with the aid of the University of Michigan IBM 360/67 computer, using the MIDAS programs. Details of specific analyses are described in the Results section, below.

There were two units of analysis, the individual, and the team, with the major emphasis on the latter. A team's data were derived by averaging all the members' individual responses to a given question. Thus, for each variable in which the team is the unit of analysis, these mean scores

are used. This method is far from ideal, given the essentially unknown representativeness of each team's sample, and the possibility of distortion by one or two deviant scores. However, it was the only available method, and the risks seemed worth taking, since the alternative was not to have team level data at all.

The qualitative data consist primarily of responses to the open-ended questions and will receive less emphasis in this paper than in the program evaluation study (Horst and BenDor, 1973). The qualitative data were useful in two main ways: as material for the Case Studies (see Appendix F), and as a fruitful source of hypotheses for the analysis of the quantitative data which is the major thrust of this paper.

Comments on the Design

Before the results of this study are presented, it is appropriate to comment on some issues raised by the design. It is not unusual to bemoan the difficulties of research with an evaluation component. Miles (1964b) noted the dearth of good studies of educational effectiveness, and more recently, Campbell (1971) concluded that no really adequate evaluation study of a major ameliorative social program had been carried out. More specific to the present study, Brotman and Suffet (1973) have pointed out how much easier it seems to measure the "effect" of drug programs in terms of knowledge and attitudes than it is to assess the actual target behavior.

The present study is, of course, not presented as a piece of evaluation research, but rather as an exploratory search for quantitative support for some ideas derived from earlier evaluation research (Horst and BenDor, 1973). Nonetheless it is important to consider the methodological problems of the study.

First, and most obvious, is the lack of any type of controlled experimental procedure. One possible strategy to evaluate DARTE's impact would have been to monitor systematically the assignment of school district teams to DARTE training so that differences between districts exposed to DARTE and those not yet exposed to DARTE could have been studied. As Campbell (1971) points out, even this approach is not ideal since it would effectively cover only the earlier stages of an innovative program (assuming that, as in this case, all groups would eventually be included in the program).

In fact, the original program evaluation design did call for some comparison with non-DARTE districts (Horst and BenDor, 1973). The plan faltered for several reasons. The first was an anticipated high nonresponse rate to the questionnaire designed for the purpose. People in communities outside of DARTE's area were expected to have little interest in answering the questionnaires for an evaluation of DARTE. Secondly, since a majority of Wayne County school districts already had DARTE teams by the period of data collection, accurate matching of communities would have

been impossible. For instance, all eight Detroit school regions already had DARTE teams, and there are no equivalent communities in the rest of Michigan. Thus, the kind of design envisioned by Campbell (1971) was not feasible in the present research.

A second abandoned part of the original evaluation plan involved interviewing non-DARTE participants from the same communities as the DARTE team members. It seemed reasonable to suppose that team members might be biased in their views of the program, whether through disillusionment, post-decision dissonance reduction, or whatever. However, it was difficult to identify equivalent non-DARTE people in the district to sample. This choice was impossible for cases in which the one occupant of a given school district role (curriculum coordinator, for instance) was a member of the DARTE team. In addition, a greater than anticipated time expended per completed interview made the large number of supplemental interviews impossible within the confines of the project's budget (approximately $10,400).

For the present study, the absence of comparative data from non-DARTE participants is less important than for research evaluating the impact of DARTE on school districts. Here, the focus was often on participants' experience of DARTE in its role as a socialization agent. Obviously the appropriate source for these data is the participants themselves, biases and all. For at least some of the other

data, the effectiveness of a team leader, for instance, participants themselves are also likely to be the best judges.

# CHAPTER V

# RESULTS

## INTRODUCTION

This chapter will begin with a discussion of the dependent variables which were used in this study. Then, after a brief explanation of the format used to present the results of each analysis, the findings for each of the hypotheses will be discussed in detail.

### Dependent Measures

#### Description

Effectiveness of the drug education teams is a central concern of this study. The ratings of team development and activities accomplishment described in the Method section will be used as dependent variables indicating team effectiveness. In addition, several interview items explicitly concerned team accomplishment, though all were more indirect ratings than those made by the I.S.R. group and the DARTE Director. Answers to the questions on the degree to which the DARTE team "had an impact on your schools" and "had an impact on your community" (questions 73 and 74 in the interview, Appendix E) reflect an overall assessment of the team's effect. The question on the extent to which "your team has been able to develop activities in your community as alternatives to drug-abusing behavior" (#19)*

*Throughout, numbers in parentheses in this form will indicate question numbers on the interview, Appendix E.

refers to a more specific outcome valued by DARTE. The degree to which the team used a process similar to DARTE's in training other groups of educators and students (#24) is in a sense a measure of the extent to which the team modeled itself after DARTE.

Originally, it was hoped that the Activity Questionnaires (see Appendix D) would provide a more precisely quantitative and less inferential measure of team development and activities accomplishment. It was intended that the information would allow detailed comparison of the types of programs carried out by effective and ineffective teams. Since eight of the team leaders did not return the questionnaires, this desirable approach became impossible. Information from the Activity Questionnaires was therefore only used in writing the Case Studies.

Data

Table I shows the mean, standard deviation, and range of each of the eight dependent variables discussed above, both the self-ratings by participants and the ratings by the DARTE Director and the I.S.R. group. Comparison of the

Insert Table I about Here

means and standard deviations of team development and activities accomplishment reveals that the I.S.R. ratings were both lower and less variable than the DARTE Director's. The difference is particularly clear for activities accomplishment (mean = 1.61, s.d. = .79; mean = 3.04, s.d. = 1.23, for I.S.R. and DARTE, respectively). The DARTE

Director appears to have been more positive about the teams' performance in general and therefore used the whole scale more. The attenuated variance of the I.S.R. group's ratings will be likely to reduce the chances of finding statistically significant correlations with the ratings. However, assuming that the ratings of the I.S.R. group were less subject to bias than those of the DARTE Director, one must conclude that the general level of team development and accomplishment was quite low. The Case Studies (Appendix F) suggest that many teams carried out a few drug education activities which involved only a subset of the team members. This level of activity received a fairly low rating from the I.S.R. group.

With respect to the ratings derived from interviews, DARTE participants themselves do not seem to have felt particularly effective. For instance, they saw their own actual impact on schools and community as being low (mean = 2.74 and 2.04, respectively).

Although each of the dependent variables reflects a somewhat different aspect of outcomes for teams, it is reasonable to expect that these measures be intercorrelated. Indeed, some of them should be intercorrelated if they are to be considered valid (e.g. DARTE's rating of team development and the same rating by the I.S.R. group). Table II

Insert Table II about Here

shows the set of distinct correlations among the dependent variables. As expected, most are highly intercorrelated,

which provides support for their validity. For instance, the two different ratings of team development are significantly correlated as are the two ratings of activities accomplishment. The intercorrelations among variables whose sources are the same (e.g. the four ratings derived from participants' responses) are not surprising. Altogether, the independent variables provide three different, though related, modes of measuring teams' effectiveness.

Format for Discussion of Hypotheses

For each of the hypotheses to be discussed below, a standard method of presentation will be used. A title will indicate the particular issue being discussed and will refer to the relevant tables. It will be followed by a statement of the hypothesis. The data employed will be described and in some instances further explanatory material will be needed before the findings shown in the tables can be presented. Conclusions will be drawn and followed by whatever interpretive comments are suggested by the data. Hypotheses 5 and 7 will be considered together, followed by a discussion of Hypotheses 6 and 8. The reason for this approach is to allow simultaneous analysis of age and sex differences for knowledge and opinion change (Hypotheses 5 and 7) and for interview variables (Hypotheses 6 and 8).

At times, qualitative data derived from answers to open-ended questions will be relevant to a particular hypothesis. Therefore, they will occasionally be used as supplements to the quantitative data.

In all instances in which significance levels are cited (and statistics with symmetric distributions are used), the two-tailed test will be reported. This is a conservative procedure which may run a risk of Type II error. One might argue that one-tailed tests should be used, since many of the hypotheses include directional predictions. However, the findings here are of potential interest whether they confirm or disconfirm the hypotheses. It should also be noted that unless otherwise stated, the assumptions on which statistical tests are based were met (e.g. similarity of cell variances for analysis of variance and similarity of slopes for analysis of covariance).

Finally, it should be pointed out that the data discussed here are only a subset of the data collected and available. Descriptive statistics for all variables in the study in which teams were the units of analysis are included in a table as Appendix G.

## INDIVIDUAL LEVEL OF ANALYSIS

### Hypothesis 1: Positive Affect toward DARTE (Table III)

Hypothesis 1 predicted that there would be a positive relationship between affect toward DARTE and team accomplishment. The question most reflective of participants' affect toward DARTE is the rating of the helpfulness of the DARTE training staff (#12). The overall rating was quite high (mean = 4.46, s.d. = .41).

Findings: Positive Affect

Insert Table III about Here

Table III shows the following:

1) The two highest correlations are with the DARTE Director's rating of activities accomplishment (r = .491) and the participants' perception of their impact on the schools (#73) (r = .516).

2) All other correlations are positive, with two significant at the .05 level, three over .300, and only one low.

Conclusions: Positive Affect

The hypothesis is supported; there appears to be a strong relationship between positive affect toward DARTE and team accomplishment.

Interpretive Comments: Positive Affect

It is interesting to note that the perception of DARTE's helpfulness is associated with team effectiveness and not particularly with team development. Also, the relationship appears stronger for the two DARTE Director variables than for the I.S.R. ratings. Aside from the attenuated variance of the I.S.R. variables, explanation for that difference may come from the fact that the variable directly concerns participants' interaction with DARTE, including the Director. It is not surprising that teams who felt the staff was helpful are those the Director perceived as effective. An interaction may have occurred in which the team members communicated to him that they experienced him as helpful; he in turn, might have perceived them as

appreciating DARTE and being ready to use his resources and may, thus, have been more helpful to them. With correlational data it is impossible to sort out the directions of these effects.

Hypothesis 2: Value Congruence with DARTE (Tables IVa, IVb)

Hypothesis 2 predicted that congruence in values between DARTE and team members would be associated with team success. Before presenting the results, it is necessary to discuss the derivation of the data and some methodological issues.

Derivation of Value Congruence Data

A measure of congruence in values between DARTE and a team can be derived from the Drug Education Opinion Inventory data collected at the beginning of the training period. For each of the twenty items, it is possible to designate a direction (agreement or disagreement) which is congruent with the views expected of professional drug educators like the DARTE staff.* Thus, for each individual it was possible to calculate a score representing the discrepancy between his opinions and those congruent with DARTE's. Discrepancy scores were only calculated for subjects who had completely filled out all 20 items on the inventory.** A score for a team was obtained by the

*Two raters agreed both with each other and with the DARTE Director on these choices.

**Scores were obtained by summing the numerical response to each item (after reversing the scale for items 1,2,3, 13, and 17) and then subtracting 20. (The last step was necessary to make a "perfect" score zero and the "worst" score 80, since responses were coded 1-5).

usual procedure of averaging the available individual scores. The mean for teams was 27.37, with a range of 20.75 to 37.

There are two ways of asking questions about this value discrepancy. 1) Were teams whose members were most congruent with DARTE at the outset of training more likely to be productive? 2) Were teams whose members changed most toward congruence with DARTE values more likely to be productive? The second question pertains to Hypothesis 4 and will be discussed below, but the first will be discussed here, after consideration of some methodological problems.

Methodological Issues in the Questionnaire Data

Only 78 of the interviewed people have complete questionnaire data. Among the reasons are the high rate of questionnaire noncompletion in participants from the first three training cycles and the turnover on teams which had been in existence from five to 20 months before the period in which interviews were conducted. Subjects were sampled from teams for interviewing without regard to whether or not they had completed the questionnaires (otherwise a possible sample bias would have been introduced). Thus, there were some teams for which there were no Opinion Inventory Scores and others for which there was only one score among the interviewed team members. Since team score averages could obviously be computed only with two or more scores, there is a substantial amount of missing data for these analyses.

One possible way of reducing the amount of missing data is to use the questionnaire scores for all team members, whether or not they were in the interview sample. While such a procedure is questionable methodologically (because of possible differences in representativeness of the interviewed and noninterviewed people), it may be justifiable to try this analysis both possible ways.*

Findings: Value Congruence

Tables IVa and IVb show the means, variances, correlations, and significance levels for the pretest opinion score discrepancy (for interview and total questionnaire samples respectively) with each of the dependent variables. Because the N's are less than 28, the means and variances for the dependent variables will differ somewhat from those shown in Table I, so those data are shown as well.

Insert Tables IVa and IVb about Here

1) Inclusion of the total questionnaire sample increases the number of school districts with data from

*One check on the advisability of adding noninterviewed subjects to the team scores is a comparison of the means for interviewed and noninterviewed subjects on the Opinion Inventory variables. Independent t-tests for the pre-to-post change scores on each of the 20 opinion items separately, and the aggregate opinion discrepancy change score, as well as the knowledge change scores to be discussed below, revealed no significant differences in means between the interviewed and noninterviewed groups. As a further test of the comparability of sub-samples, those in the interview sample who had complete questionnaire data were compared to those who did not. Of the 52 t-tests computed for the difference in the two groups' responses to interview items, one was significant at the .05 level and two at the .10 level, two-tailed. This outcome is certainly no more than would be expected by chance.

17 to 23 and decreases the variance of the discrepancy score from 25.02 to 13.59.

2) In Table IVa the only finding close to statistical significance is a correlation of -.477 between participants' perception of their impact on their schools and the pretest discrepancy for the interviewed sample.

3) In the inclusive analysis (Table IVb) no correlation is statistically significant.

Conclusions: Value Congruence

Hypothesis 2 is not supported. There is no apparent association between a team's pretest value congruence with DARTE (as measured by the Opinion Inventory) and its later performance.

Interpretive Comments: Value Congruence

The reduction in variance of the opinion discrepancy score noted in Finding #1, above, may have arisen because the addition of data reduced the number of teams having means based on only two scores. This change is over and above that brought about by the increase in number of teams.

The one near-significant finding cited above would seem to indicate that teams relatively close to the set of values resembling DARTE's perceive themselves as having more of an effect on their schools. However, one such near-significant correlation could occur by chance and the finding was not borne out in the more inclusive analysis (Table IVb). Most of the correlations are in the predicted (negative) direction, but their magnitudes are low enough

to reinforce the conclusion of nonsupport for Hypothesis 2.

Hypothesis 3: Credibility of DARTE (Table V)

Hypothesis 3 predicted that teams whose members believed DARTE's information to be credible would be able to carry out drug education programs with more success than others.

In general, the credibility of DARTE with team members was very high. The overall ratings given by respondents on the accuracy of DARTE's information about drugs (#9), legal aspects of drug abuse (#10), and social aspects of drug abuse (#11), were 4.48, 4.12, and 3.78, on a 1-5 scale (standard deviations were .70, .93, and 1.00, respectively).

Findings: Credibility

Table V shows the correlations for the three credibility variables with the dependent variables.

Insert Table V about Here

1) The correlation of the perceived accuracy of DARTE's information on social aspects of drug abuse with teams' perceived impact on schools is significant at the .05 level ($r = .420$).

2) None of the three indices of DARTE's credibility is significantly correlated with the DARTE or I.S.R. ratings.

3) Three of the nonsignificant correlations in the table are .300 or higher, and all but four are in the positive direction.

Conclusions: Credibility

There is scant support in these data for Hypothesis 3. There is no real indication that a team's perception of DARTE's information as credible is associated with its later performance.

Interpretive Comments: Credibility

Once again, there is one significant correlation, and the trend of the correlations is in the predicted direction. However, one significant finding in a set of 24 is just about what one would expect to occur by chance.

Hypothesis 4: Knowledge and Opinion Change (Tables VIa, VIb, VIIa, VIIb, VIIIa, VIIIb, IXa and IXb)

Hypothesis 4 stated that teams' positive changes in knowledge and opinions about drugs would be associated with more effective performance.

The same methodological comments made during the discussion of Hypothesis 2 apply here: there are even more missing data for the Drug Knowledge Inventory than there are for the Opinion Inventory. Thus, the same procedure of first reporting the data based on interviewees only and then presenting the data based on all subjects in the questionnaire sample will be followed here.

Before a discussion of the change scores on knowledge and opinions, the correlations for the pretest level of knowledge with the dependent variables will be shown. Though no specific hypothesis was made concerning the

relationship between pretest level of drug knowledge of a team and its subsequent effectiveness, it seems plausible to suppose that a team that started out knowledgeable (even before training) would do well in later practice. At any rate, if the correlations for the change scores during training are going to be discussed, the relationships (if any) for the pretest scores should be known.

The data are reported in terms of mean number of errors out of the 20 items on the pretest. For the 14 districts with complete data (using the interviewed sample only), the mean errors was 7.42, with a variance of 3.00. In the more inclusive analysis the sample size was still only 15, and the mean errors was 8.05 with a variance of 2.18. Once again, the variance was reduced by the addition of scores.

Findings: Pretest Knowledge about Drugs

Insert Tables VIa and VIb about Here

1) There are significant negative correlations between the number of errors on the pretest and the degree to which the team used the DARTE process (#24), its impact on the schools (#73), and its impact on the community (#74), for the interview sample (Table VIa).

2) The only finding which holds up in the more inclusive analysis (Table VIb) is the correlation between the teams' perception of DARTE's impact on their schools and a high level of pretest knowledge about drugs ($r = -.511$, $p = .052$).

Findings: Changes in Knowledge during Training

The change scores were obtained by subtracting the pretest error score from the post-test score. If knowledge has increased, the change scores should be negative, the larger in absolute value the better; the correlations with the dependent variables should also be negative. For the 14 districts with complete data, the mean is -.88, and the variance is 1.17 (interview sample only).

Insert Tables VIIa and VIIb about Here

3) There are significant positive correlations between the knowledge change scores and activities accomplishment rated by I.S.R., the perceived impact of DARTE on the schools (#73) and the community (#74), and the use of the DARTE process (#24), for the interview sample (Table VIIa).

4) None of the results cited in Finding #3, above, holds up in the more inclusive analysis (Table VIIb).

Conclusions: Drug Knowledge -- Pretest and Changes during Training

Hypothesis 4, that positive changes in knowledge would be associated with effective team performance, was not supported. Indeed, for the interview sample there were four significant correlations in the direction opposite from the predicted one (indicating that smaller changes were associated with effective performance). However, none of these findings occurred in the more inclusive analysis.

Interpretive Comments: Drug Knowledge -- Pretest and Changes during Training

Re-examination of the data in Table VIa (correlations of dependent variables with the pretest error scores of the teams) suggests ceiling effects as a possible explanation for the findings with the change scores (Table VIIa). The findings in Table VIa suggest that low levels of pretest error were significantly correlated with three of the four variables included in the seemingly contradictory findings for the knowledge change scores. Thus, it is not so surprising to find that teams demonstrating smaller amounts of change were among the more productive ones. Under the circumstances, Hypothesis 4 for knowledge change may not have been adequately tested; at any rate, it is not supported by these data.

Findings: Changes in Opinions about Drugs

Change scores on the Opinion Inventory were derived by subtracting a team's pretest value discrepancy score from its post-test score. Since the post-test discrepancy should be smaller, a negative score reflects opinion change in the directions represented by DARTE, and the correlations with the dependent variables should also be negative if Hypothesis 4 is correct. For the 15 districts with complete data, the mean opinion discrepancy change score is -6.31, with a variance of 18.85 (for the interviewed sample).

Insert Tables VIIIa and VIIIb about Here

5) There is a significant correlation in the predicted (negative) direction between opinion change and team development as rated by the I.S.R. group, for the interview sample (Table VIIIa).

6) There is a significant positive correlation between the team's perception that it could develop alternatives to drug abuse (#19) and a lack of opinion change, for the interview sample (Table VIIIa).

7) Neither Finding #6 nor Finding #7 holds up in the more inclusive analysis (Table VIIIb).

Conclusions: Opinions about Drugs

Hypothesis 4, that changes in opinions about drugs to become more congruent with positions held by DARTE would be correlated with team productivity, is not supported.

Interpretive Comments: Drug Knowledge Inventory and Opinion Inventory Data

As already noted, there were substantial missing data for both the opinion change and knowledge change data for team scores. Indeed, the analyses using these variables were based on approximately half the sample. Thus, the question about the degree to which this subset of teams is adequately representative of the whole group should be considered in evaluating these findings. While this question cannot be fully resolved, it is possible to make a comparison on the dependent variables between the teams with and without questionnaire data. Tables IXa and IXb show t-tests for independent means for all eight dependent

variables, for teams missing vs. not missing change score data on the Drug Knowledge Inventory and the Opinion Inventory, respectively.

Insert Tables IXa and IXb about Here

In the case of the knowledge change data (Table IXa), only one of the differences (the DARTE Director's rating of activities accomplishment) approaches statistical significance, and in that analysis the assumption of equal variances is violated. It is interesting to note that in every one of the eight comparisons the teams with the knowledge change data have a higher mean rating, even though none of the differences is significant.

In the comparisons for teams without and with the Opinion discrepancy change data (Table IXb) a similar pattern occurs. This time, the difference between the two groups on the DARTE Director's rating of activities accomplishment reaches statistical significance ($p = .044$), but again the equal variances assumption is not met. In one other case the difference between the two means is near-significant. For seven of the eight comparisons the group of teams which has opinion change data has a higher mean rating.

The implications to be drawn from these data are not totally clear. It would seem that there is some tendency for the teams with questionnaire data to be slightly more productive, which one might think advantageous for the possibility of finding significant correlations, since the

means are closer to the midpoints of the scale and might signify a broader range of scores. However, another comparison leads to the opposite conclusion. Counting the 16 comparisons from the two tables, one notes that in 13 cases the variance was smaller in the data-present group; in one case the variances were the same; and in only two cases were the variances larger. The lower variances in the data-present group may have contributed to the relative lack of significant findings for the change score analyses.

Hypotheses 5 and 6: Age and Sex Differences in Knowledge and Opinion Change (Tables X, XI, XII, XIII, XIV, XV)

Hypothesis 5 predicted that adults would demonstrate more opinion and knowledge change during training than students, even if they started out knowing more and being more congruent with "ideal" value positions for drug educators. Hypothesis 7 stated that although there was no clear prediction concerning sex differences in knowledge and opinion change (as indices of influenceability), if a difference occurred, males would show more influenceability. In what follows, all of the findings with respect to knowledge about drugs will be presented before the findings on opinions.

The first analysis to be considered here is a comparison by age and sex of pretest scores on the Drug Knowledge Inventory. All subjects in the first seven training cycles (the "questionnaire sample") for whom complete data are available will be included. A one way analysis of variance

for the four groups (adult males, student males, adult females, student females) with appropriately specified contrasts for age and sex differences and the interaction will be shown.*

Findings: Pretest on Drug Knowledge Inventory

Insert Table X about Here

Table X shows the complete analysis of variance table.

1) The mean numbers of errors for the four groups are: adult males = 4.89; student males = 10.65; adult females = 5.75; student females = 11.64.

2. The overall F for the one-way analysis of variance among the four groups is highly significant (F = 29.69; $p<.001$ for 3 and 103 df).

3) The specified contrast for the adult vs. student difference is -11.65** and is highly significant (F = 86.97; $p<.001$ for 1 and 103 df), indicating that the adults made significantly fewer errors than the students.

*A two-way analysis of variance computation is not presently available in the MIDAS programs used throughout this study. The procedure employed here provides essentially the same information.

**The contrasts are equivalent to a main effect for age group, a main effect for sex, and the interaction term, respectively. They are derived by summing the appropriate pairs of means and then taking the difference between the two sums. For example, the first observed contrast is -11.65. This is derived as:

(adult male mean=4.89+adult female mean=5.75)=10.64
(student male mean=10.65+student female mean=11.64)=22.29

When the second term is subtracted from the first, the contrast of -11.65 is obtained. The contrast for sex is derived in an equivalent way. The contrast for the interaction term is derived by summing the means for the adult

4) Neither the contrast for sex differences nor the one for the interaction reaches statistical significance.

The next question to consider is whether the adults, as predicted, gain more in knowledge during training than the students, even considering their greater level of knowledge at the pretest. There are two possible approaches to dealing with this question. The first is to do an analysis of variance on the change scores; the second is to do an analysis of covariance on the post-test scores using the pre-test score as the covariate. To decide which technique is preferable is a complex and controversial matter (Feldt, 1958), since the two do not always yield the same findings. The approach employed here will be to show the results of both analyses and compare them.

**males and student females and subtracting from the result the sum of the means for the student males and adult females. The effect in the analysis is identical to taking the mean of two groups and subtracting the mean of the other two groups. In each case, half the observed contrast is the difference between the means, and the analysis of variance is otherwise unaffected.

It should be noted that in this and the following analyses the designs are unbalanced (unequal numbers of subjects per cell). The result is that the sums of squares are not fully independent. The specified contrasts provide a least squares solution to a two-way analysis of variance for an unbalanced design (because each term has one degree of freedom in the numerator). The least squares solution was deemed preferable to an unweighted means analysis because the cell sizes are approximately proportional to their occurrence in the whole population (all DARTE participants, where female adults were the largest group) and because the magnitude of the sample size differences is not great enough to be likely to make the unweighted means analysis substantially different from the one shown. These considerations apply to all the analyses of variance and covariance to be described below.

Findings: Analysis of Variance on Drug Knowledge Inventory Change Scores

Insert Table XI about Here

5) The mean change scores are -.21, -1.00, -.95, and -1.50 for the adult males, student males, adult females, and student females, respectively.

6) Neither the F for the one-way analysis of variance nor the observed contrasts for age, sex, and interaction are significant.

Findings: Analysis of Covariance on Drug Knowledge Inventory Post-test Score with Pretest Score as Covariate

Insert Table XII about Here

7) The unadjusted means are: adult males = 4.68; student males = 9.65; adult females = 4.80; and student females = 10.14. The F for the unadjusted cell means is highly significant.

8) The F for the null hypothesis assumption of zero slope (and thus the t for the coefficient of the covariate, since there is only one covariate) is highly significant, indicating that the covariate has a substantial effect.

9) The adjusted cell means are: adult males = 6.48; student males = 8.12; adult females = 6.10; student females = 8.04. The overall F for the equality of the adjusted group means is not significant, although it does not miss by much ($F = 2.40$, $p = .072$ for 3 and 102 df).

10) The contrast for the adult-student difference (computed on the adjusted cell means) is statistically significant ($t = -2.40$, $p = .018$, for 102 df) and in the predicted direction. The contrasts for sex difference and the age x sex interaction are not statistically significant.

Conclusions: Age and Sex Differences on the Drug Knowledge Inventory

As expected, the adults are more knowledgeable than the students at the time of the pretest. The analysis of variance of the change scores on the Drug Knowledge Inventory indicates no significant differences among the groups, all of which had small mean change scores. However, the covariance analysis provides contradictory findings. It indicates that adjustment for the covariate (the pretest score) is not enough to "remove" the substantial adult-student differences which are in the predicted direction. Thus, one analysis supports Hypothesis 5 with respect to drug knowledge, while the other does not. Since neither analysis revealed sex differences, Hypothesis 7 is neither confirmed nor disconfirmed.

Interpretive Comments: Age and Sex Differences on the Drug Knowledge Inventory

The primary interpretive challenge is, of course, the different results of the analysis of variance on the change scores and the analysis of covariance on the post-test scores using the pretest as the covariate. The latter

indicated the predicted age difference while the former did not. Unfortunately, the conflict cannot fully be resolved here. One consideration weighing in favor of the covariance analysis is that it may more effectively account for possible ceiling effects which might have acted to suppress the adults' change scores. In addition, Feldt (1958) notes that the precision obtained by the covariance technique tends to be greater than that for the analysis of variance on difference scores. It may thus be reasonable to conclude that Hypothesis 5 is weakly supported with respect to Drug Knowledge.

Findings: Opinion Inventory Pretest

The same three analyses as were used above used to test Hypotheses 5 and 7 with respect to drug knowledge are employed here. Only those subjects who completed the pretest and post-test (all 20 items on both) are included in these data.

Insert Table XIII about Here

1) The mean pretest opinion discrepancy scores are: adult males = 25.07; student males = 33.96; adult females = 25.64; and student females = 29.84. (All four groups are relatively congruent with the opinions of experienced drug educators, considering that the total possible scale of discrepancy was 0-80).

2) The overall one-way F is highly significant ($F = 12.37$; $p<.0001$ for 3 and 107 df).

3) The contrast for the adults vs. the students is in the predicted direction and highly significant (p .0001).

4) While the contrast for males vs. females is not significant (p = .148), the interaction is nearly so (p = .057). As Finding #1 suggests, the two male groups are at the extremes with the two female groups falling in between.

Findings: Analysis of Variance for Opinion Inventory Change Scores

Insert Table XIV about Here

5) The F for the equality of variances is significant beyond the .01 level, indicating that one of the central assumptions for the analysis is violated.

6) None of the other statistics in the table is significant.

Findings: Analysis of Covariance for Opinion Inventory Post-test Score with Pretest Score as Covariate

Insert Table XV about Here

7) The unadjusted cell means are: adult males = 20.04; student males = 27.46; adult females = 20.46; and student females = 27.68, and the F for the unadjusted cell means is highly significant.

8) The F for the null hypothesis assumption of zero slope (and thus the t for the coefficient of the covariate, since there is only one covariate), is significant at the .01 level, indicating that the covariate has an effect.

9) The adjusted cell means are: adult males = 20.90; student males = 25.86; adult females = 21.16; student females = 27.22, and the overall F for the equality of the adjusted group means is significant ($F = 2.51$, $p = .005$ for 3 and 106 df).

10) The contrast for the adult-student difference (computed on the adjusted cell means) is highly statistically significant, and in the predicted direction. The contrasts for the sex difference and the interaction are not statistically significant.

Conclusions: Age and Sex Differences on the Opinion Inventory

The adults are closer to the "ideal" opinion position at the beginning of training. The analysis of variance of the change scores on the Opinion Inventory is invalidated, but in the covariance analysis, the predicted findings occur. Although the adjustment for the covariate has the effect of increasing the adults' discrepancy score and reducing the students' discrepancy score, adult-student differences persist. These analyses, then, support Hypothesis 5 with respect to the Opinion Inventory. Since neither the change score analysis nor the covariance analysis revealed sex differences, Hypothesis 7 is neither confirmed nor disconfirmed.

Interpretive Comments: Age and Sex Differences on the Opinion Inventory

Unlike the situation with the Drug Knowledge Inventory

analyses, there is a clear criterion for preferring the covariance analysis of the Opinion Inventory. The choice is made easy because of the significantly different variances of the cells in the change scores. The assumptions for the covariance analysis are met, and it does indicate support for the prediction of age differences favoring adults. Perhaps the most prudent conclusion to draw is that Hypothesis 5 is supported by the data, but not very strongly.

Hypotheses 6 and 8: Age and Sex Differences in Perceptions of the DARTE Program (Tables XVI and XVII)

Hypothesis 6 stated that adults' attitudes toward DARTE training and programs in general would be more favorable than students'. Hypothesis 8 stated that if sex differences in the perception of the DARTE program occurred, females would favor "communion-oriented" aspects while males would favor "agentic" items.

The same type of one-way analysis of variance with specification of appropriate contrasts as used in the earlier discussions will be shown here. Those interview items which seemed to reflect directly a respondent's feelings about DARTE training and programs were included in this analysis. Some of the items which may reflect feelings about DARTE but which asked primarily about the team's performance were not considered because the focus in this discussion was on participants' responses to DARTE as a socializing agent rather than on teams' accomplishments.

Findings: Perceptions of the DARTE Program

Insert Table XVI about Here

Table XVI shows a complete analysis of variance table for the first of the 14 interview variables considered: perceived accuracy of DARTE's information about drugs (#9).

1) The means for the four groups are: student males = 4.33; student females = 4.24; adult males = 4.40; and adult females = 4.66. All groups are quite high on this five-point scale.

2) The overall F for the one-way analysis of variance is significant ($F = 2.69$; $p = .049$ for 1 and 141 df).

3) The contrast for age is very nearly significant ($p = .055$) and is in the predicted direction. Neither the sex difference nor the interaction is statistically significant.

Because there are so many analyses involved in evaluating this hypothesis, the other 13 tables will be presented in abbreviated form. Table XVII shows the means, standard deviations, and N's for each of the 4 groups, specifies the overall F, and gives the level of significance associated with the observed contrasts (where the significance of the t-test is .10 or less).

Insert Table XVII about Here

4) Of the 14 analyses, 6 (5 for which the analysis is valid) indicate age differences in the predicted direction which are significant or are at the trend level ($p<.10$). This number of significant findings is greater than would be expected by chance.

5) There are no significant sex differences. The one interaction effect at the trend level occurs in an analysis for which the cell variances are unequal.

Conclusions: Perceptions of the DARTE Program

Hypothesis 6 is confirmed by these data. Adults appear to have a more favorable view of DARTE than do students. Hypothesis 8, which was contingent on the appearance of sex differences, is neither confirmed nor disconfirmed.

Interpretive Comments: Perceptions of the DARTE Program

These findings do not seem to require much explanation. Nonetheless, it is interesting to note that the predicted age difference is found at near-significant levels for two of the three credibility items (#9-11). This finding could reflect a student disposition to be less trusting than adults of an adult-based authority like DARTE. However, the alternative explanation that students were simply less willing to endorse extreme positions on the scale cannot be completely ruled out as an explanation for the adult vs. student differences on several of the variables where the mean rating given by all four groups was quite high.

TEAM LEVEL OF ANALYSIS

Hypothesis 9: The Importance of Team Development (Tables XVIII and XIX)

Hypothesis 9 predicted that positive team development would be associated with effective team accomplishment.

In this study, team development serves a dual role as both a predictor and a dependent variable. For most of the

analyses, this second role is stressed. In this section, however, the two team development ratings (by the I.S.R. team and the DARTE Director) will be examined in their relationship to each other and to the rest of the dependent variables. As noted earlier in this chapter, the DARTE Director's ratings are higher and more variable than the I.S.R. group's (mean = 2.57, s.d. = 1.03; mean = 1.53, s.d. = .84, respectively).

Findings: Quantitative Date on Team Development

Insert Table XVIII about Here

Table XVIII is actually a subset of Table II, but is presented here for the sake of clarity.

1) The two team development variables are significantly intercorrelated, as they should be.

2) Each team development variable is also correlated with both DARTE's and I.S.R.'s activities accomplishment ratings.

3) The DARTE Director's rating of team development is significantly correlated with all the other dependent variables which were derived from participants' interview data.

4) The I.S.R. group's rating of team development is significantly correlated with the degree to which team members felt they used a DARTE-like process in training others (#24) but not with the other interview variables.

Another approach to examining team development was derived from DARTE's definition of team development. DARTE considered the involvement of students to be an important

goal in its efforts to develop working drug education teams. Thus, the degree of student involvement on a team should be related to the team development ratings. In addition, if DARTE's emphasis on youth involvement is appropriate, the degree of student involvement should be related to the activities accomplishment variables as well. Accordingly, the author reviewed the interviews from each school district and assigned a rating from one (no student involvement) to five (high involvement) to each team. The mean was 2.68, and the standard deviation was 1.36. This variable was then correlated with the dependent variables.

Insert Table XIX about Here

5) The student involvement rating is significantly correlated with both DARTE's and I.S.R.'s team development ratings, as it should be.

6) Student involvement is significantly correlated with I.S.R.'s rating of activities accomplishment and nearly so with the DARTE Director's rating ($r = .338$, $p<.10$).

7) The rating of student involvement is also significantly correlated with participants' perceptions of their ability to develop alternatives to drug abuse (#19) and their use of the DARTE process in training others (#24), and nearly so with the rating of DARTE's impact on the schools (#73).

Findings: Qualitative Data on Team Development

The qualitative data provide further support for the importance of team development and help specify some of the

factors affecting it and its relationship to team effectiveness. One question specifically addressed student involvement in planning team activities (#34). As the earlier evaluation report (Horst and BenDor, 1973) noted, while students had some degree of involvement, they rarely if ever had genuinely equal power. With that qualification, student involvement still ranged greatly. In a few cases, some of the usual adult-student distinctions (e.g., use of formal titles, permission to smoke) were dropped. A capacity to collaborate in cross-age groups characterized the more successful teams.

The opposite extreme was found in districts in which students dropped out of the team soon after training -- in one instance, because meetings were scheduled outside of school time when many students held jobs. Students who dropped out were usually not replaced. It was common to have student involvement start high but taper off. Sources of difficulty in team development which were cited by participants included: transportation problems; adults' having too-great expectations of the students (thinking that the major initiative should come from students); student discouragement in response to external constraints (e.g. resistance from the administration); and an inability of some adults and students to accept working with each other in an egalitarian way. On the more successful teams these problems were noteworthy by their absence.

In six teams, at least one specific mention was made of difficult interpersonal relationships as a factor negatively affecting team development. This number is not large enough to permit statistical comparison, but it seems likely that these teams were not among the successful ones.

It was evident, also, that some difficulties stemmed from a lack of communication. Some team members commented that they were not informed about meetings. There was occasional evidence, as well, of misunderstanding among team members, especially across the generations.

Conclusions: Team Development

Both quantitative and qualitative data provide support for Hypothesis 9. Constructive student involvement and favorable team development are associated with effective team performance.

Interpretive Comments: Team Development

It is interesting to note some of the differences in the relationships found with the I.S.R. rating and the DARTE Director's rating of team development. First, the correlation between the DARTE Director's ratings of team development and activities accomplishment (Table XVIII) is so high as to suggest that for him, one was tantamount to the other. Second, the relationships found with the I.S.R. ratings are generally lower than those for the DARTE Director's. A possible reason for this difference is the relatively low variance of the I.S.R. variables which was noted earlier in the discussion of Table I. Finally, it

should be noted that the I.S.R. ratings of team development and activities accomplishment are not independent from the ratings of student involvement (the author had participated earlier in making the I.S.R. ratings). This nonindependence is probably the source of the stronger relationships for the I.S.R. ratings and the student involvement rating (Table XIX). The student involvement findings did, however, correlate with several more independently derived ratings, including the DARTE Director's.

Hypothesis 10: The Importance of Communication on the Team (Table XX)

Hypothesis 10 stated that the greater the openness of communication among team members, the more the team would be able to accomplish. No direct observations of the teams' group process were made, so the evidence on this question is indirect. The items asking about the degree to which the communications activities helped the team be more open with each other (#15) and the helpfulness of training to work with others of different backgrounds (#17) are two interview questions relevant to this hypothesis. In general, teams felt that the communications activities had facilitated openness (mean = 3.79, s.d. = .46) and that the training to work with others of different backgrounds had been helpful (mean = 3.83, s.d. = .52)

Findings: Communication on the Team

Insert Table XX about Here

1) The rating of the helpfulness of communications activities for the teams' openness (#15) is significantly correlated with the helpfulness of training on working with others of different backgrounds (#17).

2) The rating of the helpfulness of communications activities to the teams' openness is not significantly correlated with any of the dependent variables.

3) The rating of the helpfulness to the team of training in working with others of different backgrounds is significantly correlated with team development as rated by the I.S.R. group, the participants' ratings of DARTE's impact on the schools (#73), and their use of the DARTE process in training others (#24).

Conclusions: Communication on the Team

Although there seems to be some support for the importance of intra-team communication in the qualitative findings discussed with Hypothesis 9, the quantitative data here do not provide strong support for Hypothesis 10.

Interpretive Comments: Communication on the Team

One problem with this analysis is that the questions are not purely about the communication level among members; they also include a reference to the helpfulness of DARTE's training. Conceivably, some team members might have felt that there was a high level of communication on the team but that DARTE's training did not particularly facilitate that openness. Thus, the results of this analysis are probably somewhat ambiguous. Given the uncertainty of

interpretation, only a strong pattern of relationships could have been taken as support for Hypothesis 10.

Hypothesis 11: The Importance of Team Leadership

(Table XXI)

Hypothesis 11 stated that the greater the perceived effectiveness of its team leader, the more drug education a team would accomplish.

Each DARTE team began its work with a team leader. These leaders were chosen by a variety of methods (#8) ranging from being appointed by an administration official to assuming the job by default. Two questions in the interview pertained to the respondents' feelings about their DARTE team leaders: the team's degree of satisfaction with the leader at the end of training (#30) and the effectiveness of the leader since training (#31). Of these, the second is probably more important, since it taps participants' evaluation of their leader during the time the team was actually trying to carry out drug education activities. Satisfaction with the leader at the end of training was at a higher level (mean = 4.00, s.d. = .56) than the perception of the leader's effectiveness after training (mean = 3.11, s.d. = .76). The two variables are not strongly correlated with each other ($r = .366$, $p<.10$, 26 df) so it is potentially useful to analyze them separately.

Findings: Quantitative Data on Team Leadership

Insert Table XXI about Here

1) Six of the correlations are significant at the .05 level and three more at the .01 level. Of the seven which are not significant, all are positive and only one is below .300.

2) Of the nine significant correlations, six occur with the rating of the effectiveness of the leader since training, while three are associated with the teams' satisfaction with their leaders at the end of training.

Findings: Qualitative Data on Team Leadership

In response to a general question concerning issues affecting the development of the team (#35), a number of respondents pointed to the team's leadership. At least six teams had experienced turnover in their leadership by the time of the interviews. Criticism of the quality of leadership was not rare, and ranged from a leader's inability to get a decision-making process started (thus creating a power vacuum which was filled by the administration) to a tendency to take over everything the team was doing. Leaders were sometimes described as having too many competing demands on their time, leading some respondents to conclude that team leadership should be a full-time job in the school system.

Conclusions: Team Leadership

Hypothesis 11 would appear to be strongly supported. Both the quantitative and qualitative data support the prediction that the leader's effectiveness is associated with his or her team's performance in accomplishing drug education.

Interpretive Comments: Team Leadership

Support for the importance of the team leader's role is clear. It seemed possible, however, that participants' responses to their team leaders might differ depending on whether the leader was male or female, and that those differences might affect team outcomes. This possibility was checked by means of a series of t-tests comparing the 13 teams with male leaders with the 15 teams with female leaders. There were no significant differences on any of the team activities accomplishment variables, nor on participants' personal commitment to team plans (#22) and their perception of their team's commitment (#23), nor on either of the variables evaluating the team leader him or herself.* Presumably, then, the relationships discovered earlier were similar for leaders of both sexes.

Hypothesis 12: Personal and Team Commitment (Table XXII)

Hypothesis 12 stated that high personal and perceived team commitment to working on the action plans for drug education would be related to a high degree of success in carrying out those plans.

Two questions (#22 and #23) asked respondents about their personal commitment to working on the action plans developed by the team and their perception of their team's

*Since this analysis was not directly related to support or nonsupport for the hypothesis and none of the differences was significant, it is not shown.

commitment, respectively. The level of personal commitment (mean = 4.04, s.d. = .59) is reported to be somewhat higher than the perceived team commitment (mean = 3.52, s.d. = .65). However, the two variables are fairly highly correlated with each other ($r = .546$, $p<.01$ for 26 df), so that similar findings for the two may be expected. One's own sense of commitment is quite likely to affect one's perception of others'; it may also be said that teams able to gain high commitment from one person may be more likely to do so for the whole group.

Findings: Personal and Team Commitment

Insert Table XXII about Here

1) The rating of personal commitment to the action plan is not significantly correlated with any of the dependent variables.

2) The rating of the team's perceived commitment to the action plan is significantly correlated with four variables, three of which are ratings by the DARTE Director and the I.S.R. group. The rest of the correlations for team commitment are .299 or higher.

Conclusions: Personal and Team Commitment

Hypothesis 12 is supported with respect to team commitment and not supported with respect to personal commitment. Teams whose members perceive the team as having been highly committed to its action plan at the end of training evidence higher levels of accomplishment than those which perceived lower levels of commitment.

Interpretive Comments: Personal and Team Commitment

Despite the relatively high correlation of personal and team commitment with each other, the pattern of findings for the two variables differs. Individual commitment is not a predictor of team accomplishment or of team development, while team commitment is a predictor of both. One might argue that the mean personal commitment score for a team (the score used here) is a "truer" measure of team commitment than the mean score of members' perceptions of the whole team's commitment. In this case, however, the data seem to suggest otherwise. Apparently, the perceived levels of commitment are more important than the "real" levels of commitment.

Hypothesis 13: The Importance of High Status Members of the Team: (Table XXIII)

Hypothesis 13 stated that teams which have some high status members will be able to accomplish more.

In school systems, administrators are generally regarded as having high status. Thus, teams whose composition included administrators may be presumed to have higher status members. In testing for the effect of this difference, the 12 teams which did not have administrators on their roster were compared to the 16 teams which had at least one administrator, using a t-test for independent samples for each of the dependent variables.

Findings: High Status Members of the Team

Insert Table XXIII about Here

1) There are no significant differences between the teams with and without administrators on any of the dependent variables.

Conclusions: High Status Members of the Team

The data demonstrate that Hypothesis 13 is not confirmed. The presence of administrators on a team is not, by itself, associated with greater team productivity.

Interpretive Comments: High Status Members of the Team

In assessing the findings, it seemed plausible to suggest that the helpfulness of having administrators on a team might only be demonstrated when the administrator occupied the role of team leader. Thus, it seemed appropriate to perform an analysis identical to the one shown in Table XXIII, but comparing the 11 teams whose leaders were administrators with the other 17. But, as with Table XXIII, there were no significant differences between the two groups on the dependent variables. (This analysis is not shown since it is not, in fact, independent of the previous one.)

In the open-ended questions, some respondents did indicate that having administrators on a team would have been helpful. Although the lack of administrators on a team may have been perceived by some respondents as a hindrance to team accomplishment, the quantitative data do not lend support to this notion.

COMMUNITY LEVEL OF ANALYSIS

Hypothesis 14: Severity of the Drug Problem (Tables XXIV, XXV)

Hypothesis 14 stated that there would be no relationship between a team's perception of the severity of the community's drug problem and its ability to carry out drug education activities.

A number of the questions in the interview focused on respondents' perceptions of the drug problem in their community. I will concentrate on four related, but conceptually distinct questions: the "seriousness" of the drug problem in the teams' community (where 1 was "not at all" and 5 was "very") (#38a); the overall drug problem relative to other Wayne County communities (#39); the availability of drugs relative to other Wayne County communities (#48); and the overall drug problem relative to two years ago (#51). (For the three questions calling for comparisons, 3 is the middle point, or way of expressing "same.") The first question asks for an "absolute" rating of the seriousness of the drug problem, while the second and third call for a comparison between the respondent's own community and surrounding Wayne County communities. The fourth question gives a respondent a chance to express the amount of change in the problem (decreasing, staying the same, or getting worse). The means of these variables are 3.84, 3.11, 3.52, and 3.40,* respectively, indicating that the prevailing

*Standard deviations are: .51, .54, .43, and .55, respectively.

view that the drug problem is quite serious, though not particularly different from that of other Wayne County communities. Availability of drugs is seen as being somewhat greater than in surrounding communities, and the problem is seen as growing worse over time.

To begin with, the relationship of these four variables to each other will be considered.

Findings: Severity of the Drug Problem

Insert Table XXIV about Here

1) Of the six possible (independent) intercorrelations, four are significant.

2) The variable measuring perceived change in the drug problem is the least correlated with the others.

The next analysis to be considered is the correlations for the four drug problem variables with the dependent variables.

Insert Table XXV about Here

3) Only two of the correlations are significant, no more than would be expected by chance among such a large number of correlations.

4) The prevailing direction of the correlations is negative (23 out of 32).

Conclusions: Severity of the Drug Problem

Hypothesis 14 would appear to be supported by these data, though perhaps rather weakly. There is certainly no significant positive relationship between the severity of the drug problem in a team's community and the team's effectiveness.

Interpretive Comments: Severity of the Drug Problem

The preponderance of negative signs among the correlations raises the possibility that there is actually a negative relationship between the severity of the drug problem and a team's capacity to carry out drug education. For the 23/32 distribution of signs, using the normal approximation to the binomial distribution, $z = 2.30$ and $p<.02$, two-tailed (Siegel, 1956). Even though it might seem persuasive, this analysis is highly questionable because of the non-independence from each other of both the drug problem variables (Table XXIV) and the dependent variables (Table II). A chance-level relationship could lead to a spuriously high number of signs in the same direction. Thus, it is not warranted to conclude that Hypothesis 14 has been disconfirmed by these data.

Hypothesis 15: Community Income Level (Table XXVI)

Hypothesis 15 predicted that the higher the income level of a team's community, the more drug education it would be able to accomplish.

Several measures of the economic resources of a community were used in this study. A principal one was the respondents' rating of the income in their community relative to the rest of Wayne County (#46). The mean for this variable was 2.99 (s.d. = .54). Secondly, the average income for the community from the 1970 U. S. Census, expressed in thousands of dollars, was also used (mean = 11.78,

s.d. = 1.96). The correlation between these two variables is very high ($r = .793$, $p<.0001$ for 20 df). Ordinarily, the Census income figure, being a ratio scale, would be preferable, but because school district names and community boundaries do not always overlap exactly, there are missing cases for the Census data. Therefore (and in view of the high relationship with the interview measures of income) the findings for the measure from the interview will be shown.

Findings: Community Income Level

Insert Table XXVI about Here

1) Two variables — the DARTE Director's ratings of team development and activities accomplishment — are significantly correlated with the participants' ratings of their community's income level.

2) The correlation for the team's ability to develop alternatives to drug abuse in the community (#19) is very nearly significant.

3. All other correlations are positive, but not statistically significant.

Conclusions: Community Income Level

There is some support for Hypothesis 15 in these data, but it appears relatively weak. There is a somewhat positive relationship between the perceived relative income level of a community and the effectiveness of its DARTE team.

Interpretive Comments: Community Income Level

The pattern of findings would appear to suggest an alternative explanation: that the DARTE Director is likely

to perceive middle class teams as successful. However, a check on the findings using the Census income variable (not shown) weakens this explanation somewhat. As with the analysis in Table XXVI, there are significant correlations (.05 level for 20 df) for this variable with the two ratings by the DARTE Director. However, the correlation for the team's ability to develop alternatives to drugs (#19) is also significant and the correlations for the I.S.R. group's rating of the team's activities accomplishment is nearly significant (.06 level for 20 df). Finding significant correlations for the Census income data with outcome variables other than the DARTE Director's ratings lends support to the original interpretation of Hypothesis 15.

Hypothesis 16: The Role of Administrative Support (Table XXVII)

Hypothesis 16 stated that team success would be associated with top-down support (from administrators, school boards, etc.) and the reverse would be true as well.

As stated in the earlier program evaluation report (Horst and BenDor, 1973), administrative nonsupport was often cited as a hindrance to teams' activities:

> This nonsupport took a number of forms: not hearing the team's presentation, turning the team's proposals down, taking over the team's work with other projects, "approving" projects but not allocating money, refusing released time for teachers, or simply being so unclear about their expectations that the team felt unsupported. (p. V - 60).

Resistance may have been encountered with administrators at the individual school building level, or higher up in the hierarchy. In view of the apparent importance of this factor, a quantitative analysis of it was undertaken. The interviews for each shool district were reviewed and the teams were divided into two groups -- those for which some form of administrative nonsupport was mentioned, and those in which nonsupport was not mentioned. Then these two groups were compared on the dependent variables using t-tests for independent samples.

Findings: Administrative Support

Insert Table XXVII about Here

1) Three of the differences -- ability to develop alternatives to drug abuse (#19), impact on schools (#73), and use of the DARTE process in training others (#24) -- are in the predicted direction and significant at the .05 level or less.

2) The difference for the impact on the community approaches statistical significance ($p<.10$).

3) None of the differences in the ratings made by the I.S.R. group and the DARTE Director is significant, although all are in the predicted direction.

Conclusions: Administrative Support

Hypothesis 16 appears to be supported, though not strongly. Teams affected by administrative nonsupport seem to be among the less productive ones.

Interpretive Comments: Administrative Support

It is noteworthy that the findings differ so much depending on the source of the dependent variable. The significant or near-significant findings all occur for the variables derived directly from interview data, whereas the differences on the ratings by the DARTE Director and the I.S.R. group aren't even close to being statistically significant. The appropriate interpretation of this difference is not obvious, but perhaps thoseteams whose members felt they had been ineffective sought explanations for their lack of success and chose to mention indications of administrative non-support.

COMPARISON OF LEVELS OF ANALYSIS

Hypothesis 17: Comparison of Levels of Analysis

(Tables XXVIII, XIX)

Hypothesis 17 stated that individual level variables would be less successful predictors of team outcome than would team and community level variables.

Findings: Outcome of Previous Hypotheses

1) At the individual level, where the first four hypotheses pertained to team accomplishment, one hypothesis was supported.

2) At the team level four of five hypotheses received at least some support.

3) At the community level all three hypotheses were supported, but the support was relatively weak in two of three cases.

Conclusions: Outcomes of Previous Hypotheses

From this count it would appear that the team and community level hypotheses were more successful than the individual level ones and the hypothesis is supported.

Findings: Qualitative Data

4) The qualitative data cited in Horst and BenDor (1973) indicate that factors most frequently mentioned as helping or hindering a team were at the team or school district level. Examples are: the role of administrative support; the effectiveness of leaders; inappropriate selection of members, bureaucratic red tape in Detroit (which had recently been decentralized into eight school regions); and school district political conditions (e.g. strikes, rejection of bond issues).

5) Some individual level variables were also mentioned: feelings of apathy or futility; personality clashes; good individual skills; and the helpfulness of DARTE are all good examples.

Conclusions: Qualitative Data

The qualitative data seem to provide support for the idea that team and community level variables are more important than individual level variables in predicting team outcomes.

Interpretive Comments: Outcomes of Previous Hypotheses and Qualitative Data

Neither of these first two attempts at assessing Hypothesis 17 is very satisfactory. Both are quite general

and imprecise, for neither gives a very clear picture of the relative power of variables across the three levels. A more quantitative approach is needed.

Findings: Multiple Regression Analyses

Multiple regression is a statistical technique for assessing the capacity of two or more independent variables to predict values on a dependent variable. Thus, in the present case, it is possible to choose one independent variable at each of the three levels of analysis and test their simultaneous ability to predict values on one of the dependent variables employed in this study. Table XXVIII shows one such analysis, where the independent variables are helpfulness of DARTE (#6), rating of student involvement, and community income (U. S. Census data), for the individual, team, and community variables, respectively. The dependent variable is activities accomplishment as rated by the DARTE Director.*

Insert Table XXVIII about Here

6) The regression is statistically significant ($F = 4.289$, $p = .019$ for 3 and 18 df). $R^2$ is .417, indicating

*For this and all other regression analyses to follow, the predictions are done in terms of standardized scores, since the scales and distributions of the independent and dependent variables differ from each other. For several of the regression equations to be described, a scatter plot showing the predicted against the actual scores for the dependent variable was done. These plots (not shown) indicated that there were no dramatic violations of a linear model, e.g., no systematic over-or-under-prediction at any point of the scale. The F test is used to indicate the "goodness" of the linear model, using a least squares approach.

that slightly over 40% of the variance is accounted for by the regression.

Conclusions: First Multiple Regression Analysis

It is possible, at least in this case, to identify three variables which can successfully predict activities accomplishment as rated by DARTE.

Interpretive Comments: First Multiple Regression Analysis

An examination of the t - statistics associated with the partial correlations for the independent variables would seem to suggest that the community level variable, Census income, had the most effect. However, a more precise way of finding the independent contribution of each of the three independent variables would be desirable.

In order to make this assessment, it is possible to first perform a regression analysis using all three independent variables, and then to repeat it three times, leaving out a different independent variable each time. Then the $R^2$'s (proportion of variance accounted for) of each of the analyses with one variable missing may be compared with the $R^2$ when all three variables are used. An F statistic suggested by Overall and Klett (1972)* can then

$$*F=\frac{[R^2(\text{all variables})-R^2\ (\text{one variable left out})]\times[N-p-1]}{1-R^2\ (\text{all variables})}$$

for 1, (N-p-1) df where: N = number of cases
p = number of independent variables

(Overall and Klett, 1972, 422-424).

be computed to see if the independent contribution made by each independent variable is statistically significant.

The question this approach addresses is: does inclusion of a particular variable in the regression equation result in a statistically significant increase in the proportion of the variance accounted for by the regression line? The most complete way to apply this technique to Hypothesis 17 might be to use all possible distinct combinations of three independent variables, one each from the individual, team, and community levels, and make the comparisons described. There are several practical considerations weighing against such an approach, however. The first is that the number of required analyses would be prohibitively large. Second, regression equations are not valid if they include independent variables which correlate as or more highly with each other than with the dependent variable. Since many of the independent variables are intercorrelated, and since many of them do not correlate significantly with the dependent variables, many of the possible analyses would be inappropriate. Third, for some of the possible comparisons the amount of missing data would be high, reducing the degrees of freedom for error to an intolerably low level.

For the reasons cited, several decisions were made. First, only the three dependent variables which seemed most indicative of team accomplishment were considered: participants' rating of DARTE's impact on the schools (#73); the

I.S.R. group's rating of team activities accomplishment; and the DARTE Director's rating of the team activities accomplishment. Second, the opinion and knowledge change variables were not included in these analyses, because they had the most missing data. This loss was unfortunate since these variables were also the ones least intercorrelated with team and community level variables. Third, an effort was made to choose independent variables which had shown some degree of relationship with the dependent variables (in previous step-wise regression analyses not further reported here) without being too highly intercorrelated themselves. These restrictions severely limited the possibilities for analysis and, in effect, allows the conclusions drawn here to be illustrative of this approach rather than definitive in any way.

Table XXIX shows the results of six analyses comparing regression analyses, two each for the three chosen dependent variables. The table shows the $R^2$'s, F's, df, and

Insert Table XIX about Here

probability levels associated with each F. Probability levels up to $p<.25$ are shown to facilitate a detailed comparison of the contributions of the independent variables. The results in the table are most easily summarized here by means of a chart allowing for easy comparison. As in Table XIX, in each case the community level variable is shown first, followed by the individual and team level variables.

a) Activities accomplishment rated by DARTE:

| | |
|---|---|
| income (from U. S. Census) | $p<.10$ |
| helpfulness of DARTE (#6) | $p<.25$ |
| degree of student involvement on team | n.s. |

b) Activities accomplishment rated by DARTE Director.

| | |
|---|---|
| % with less than high school education (from U. S. Census) | $p<.05$ |
| helpfulness of DARTE (#6) | n.s. |
| effectiveness of team leader (#21) | $p<.25$ |

c) Activities accomplishment rated by I.S.R. group

| | |
|---|---|
| income (from U. S. Census) | $p<.10$ |
| helpfulness of DARTE (#6) | n.s. |
| effectiveness of the team's leader | $p<.25$ |

d) Activities accomplishment rated by I.S.R. group

| | |
|---|---|
| % living in the same house in 1970 as in 1965 (from U. S. Census) | $p<.10$ |
| accuracy of information on social aspects of drug abuse (#5) | n.s. |
| degree of student involvement on team | $p<.01$ |

e) Impact of DARTE on schools (#51)

| | |
|---|---|
| "age" of school district 1=old, losing students; 2=stable; 3=growing: rated by DARTE Director | n.s. |
| helpfulness of DARTE | $p<.025$ |
| degree of student involvement on team | $p<.25$ |

f) Impact of DARTE on schools (#51)

| | |
|---|---|
| % living in same house in 1970 as in 1965 (from U. S. Census) | n.s. |
| helpfulness of DARTE | $p<.10$ |
| degree of student involvement on team | $p<.25$ |

Findings: Comparisons of Multiple Regression Analyses

7) For the two analyses with the DARTE Director's rating of activities accomplishment as the dependent variable, the community level variable makes the most important

contribution. Team and individual level variables make equal, and lesser, contributions.

8) For the two analyses with the I.S.R. group's rating of activities accomplishment, the individual level variable makes little contribution, while the team and community level variables both make substantial contributions.

9) For the two analyses with participants' rating of DARTE's impact on the schools as the dependent variable, the most important contributions are made by the individual level variable, with the team level variable next. The community level variables make very little contribution.

Conclusions: Comparisons of Multiple Regression Analyses

The hypothesis that individual level variables would be the least effective predictors is confirmed for the accomplishment ratings done by the DARTE Director and the I.S.R. group, which may be regarded as the most "objective" ratings. It is disconfirmed for the participants' rating of DARTE's impact on the schools.

Interpretive Comments: Comparisons of Multiple Regression Analyses

It must be emphasized that the quantitative findings cannot be generalized beyond the specific analyses performed. It is possible that a different selection of either independent or dependent variable would yield somewhat different findings (even excluding the trivial cases

in which independent variables are chosen which do not correlate with the dependent variable). On the other hand, the quantitative findings do provide some additional support for the qualitative findings reported earlier.

## SUMMARY

Before moving on to a discussion of these findings, it is appropriate to summarize and comment on the conclusions drawn in this chapter.

### Individual Level of Analysis

Some of the predictions at the individual level were plagued with methodological complications; this difficulty was particularly apparent in Hypotheses 2 and 4 which used the questionnaire data. Hypothesis 2 predicted that value congruence with DARTE would be associated with more effective team performance, while Hypothesis 4 said that favorable knowledge and opinion changes during training would be predictors of team effectiveness. Neither hypothesis was confirmed.

Hypothesis 3, which said that teams which perceived DARTE as credible would be effective, was particularly closely related to the theoretical perspective of Clausen (1968). However, the hypothesis was not confirmed in this study. Hypothesis 1, predicting an association between positive feelings toward DARTE and team accomplishment, was also related to Clausen's view of the socialization process. That hypothesis was strongly confirmed.

The other four hypotheses at the individual level concerned age and sex differences in knowledge and opinions (Hypotheses 5 and 7) and in response to DARTE (Hypotheses 6 and 8). With respect to the questionnaire measures, adults started out knowing more and being more congruent with DARTE in their opinions. These differences were maintained at the post-test, even after the pretest differences were accounted for by the analysis of covariance procedure. Adults also had more favorable attitudes toward DARTE and its training.

DARTE is supposed to be a youth-oriented program in that its ultimate target population is students in Wayne County. However, it would appear from these data that adults are more responsive to DARTE than youth. However, at least one confounding factor must be considered. It seems very likely that the adults, most of whom were professional level employees of their school districts, were on the whole more intelligent than the students. It is plausible to suppose that differences in intelligence might be associated with a greater likelihood of value congruence with and positive attitudes toward DARTE. Such an association is even more likely for the measure of drug knowledge. Thus, age differences alone may not have been the only factor contributing to the observed adult-student differences (Hypotheses 5 and 6).

Sex differences are commonly reported in a wide variety of studies. However, sex differences were minimal in the present research (Hypotheses 7 and 8).

Team Level of Analysis

For the most part, team level hypotheses were supported. Team development and student involvement were both related to team accomplishment (Hypothesis 9). The measures of communication on the team were somewhat indirect and ambiguous, and they were not strongly associated with teams' effectiveness (Hypothesis 10).

The importance of a group's leader is one of the most common generalizations in group dynamics research. Here, Hypothesis 11, which predicted a positive relationship between the leader's perceived effectiveness and a team's accomplishment, was strongly confirmed. It made no difference whether the leader was male or female, or whether the leader was an administrator or not. Indeed, the presence or absence of administrators made no apparent difference in teams' accomplishment (Hypothesis 13).

Finally, an important component of team success appeared to be the degree of a team's commitment to its task, as perceived by its members (Hypothesis 12). The degree of reported personal commitment was not associated with team success.

Community Level of Analysis

Hypothesis 14 predicted that the severity of a

community's drug problem would not be associated with the success of its team in carrying out drug education. The data bore out this prediction. Hypothesis 15 said that a community's income level and its team's success would be positively correlated. The confirmation of that hypothesis suggests income level as a possible confounding factor in Hypothesis 14. A negative relationship between income level and perceived severity of the drug problem might contribute to the absence of a relationship between the severity of the drug problem and team accomplishment, by counteracting the effect of the (possibly) higher motivation level of teams in communities with a severe problem.

Finally, teams were adversely affected by a lack of administrative support (Hypothesis 16). When teams perceived that the support was absent, they did not accomplish much.

## Comparison of Levels of Analysis

Several different approaches to comparing the efficacy of individual, team, and community level variables were used. In general, they all supported Hypothesis 17: team and community level variables seemed to be more effective predictors of team outcome than were the relevant individual level variables.

# CHAPTER VI

# DISCUSSION

In the preceding chapter, a number of conclusions deriving from the data were examined. In this chapter I will discuss some of the issues raised by the findings, although I will not be covering each finding in detail. For the sake of clarity, the discussion will be divided into two major sections: methodological issues, and substantive issues.

## Methodological Issues

### Questionnaire Measures

Evaluation of the findings using the opinion and knowledge questionnaire measures as predictors of team success is made difficult because of the lack of standard experimental procedure in collecting the pre and post-test data. DARTE had complete control over this aspect of data collection, and gave the questionnaires only to DARTE participants (the experimental group, in effect). Control group data (pre and post-tests given at similar time intervals to matched samples of non-DARTE participants from the same communities) were never collected, despite recommendations that these procedures be used (Des Jarlais and Horst, 1971; Horst, 1972). DARTE evidently had other priorities for spending its limited budget. In addition, the DARTE staff may have decided that the problem of

obtaining appropriately matched samples of people and getting them to fill out the questionnaires at the right times was insurmountable. Whatever the reason for the decision, the lack of control group data makes it impossible to conclude decisively that observed changes in knowledge and attitudes during training were due to participation in DARTE. Learning from other sources and reactive effects from repeating the measures are alternative explanations which cannot be ruled out. In fact, if the observed changes in the "right" direction were not primarily due to DARTE training, then the failure to find a significant relationship between opinion and knowledge change and the dependent variables (Hypothesis 4) would not be surprising.

Adult-Student Differences

In order to interpret findings, it is sometimes necessary to consider the effects of possible confounding variables in evaluating alternative explanations. Thus far I have treated Hypotheses 3 (concerning the credibility of DARTE) and 4 (concerning knowledge and attitude change as possible predictors of team performance) quite separately from Hypotheses 5 and 6 (concerning predicted adult vs. student differences in opinion and attitude scores and in response to aspects of DARTE training). Adult-student differences were found on some of these variables. For instance, Table XVII showed that on the credibility variables the average of the whole group of student scores was lower

than the average for adults (and the difference was significant for two of the three variables). Since the scores for each team were made up of the available adult and student scores averaged together, it seemed possible that the number of student scores used to make up a given team score might be a confounding factor systematically affecting the scores. In the worst possible case, the absence of student scores for a team might well reflect something negative about a team (and thus be associated with low ratings by DARTE and I.S.R.), while the team scores on some of the independent variables (derived from all or nearly all adult scores) might actually be high. At any rate, it seemed useful to check out the correlations between the number of student scores present and used to derive a score, and the score itself. As the Method chapter pointed out, the goal in sampling from teams was to have two of the six interviewees per district be students. In the actual sample, 12 teams were represented by two students, and three more had three students. For four teams there were no students, while nine teams were represented by one student apiece.

Insert Table XXX about Here

Table XXX shows the correlation of the number of students interviewed per team with the dependent variables. One of the correlations (with team members' ratings of their capacity to develop alternatives to drug abuse -- #19) is significant ($r = .551$, $p < .01$) while the rest are

positive and two (both ratings by DARTE) are above .300. These findings reinforce somewhat the idea that teams with fewer students available to be interviewed were among the less successful ones. The next question, then, is whether the number of students making up a score is significantly related to the scores for the independent variables on which there were adult-student differences.

Insert Table XXXI about Here

Table XXXI shows the correlations between the number of students making up a score and the three credibility variables (pertaining to Hypothesis 3) and several questionnaire variables (pertaining to Hypotheses 2 -- concerning pretest opinion congruence with DARTE -- and 4 -- concerning knowledge and opinion changes during training).

For the credibility variables, the correlations are very low. They are not even in the predicted (negative) direction. Although students as a group are lower than adults on the means of these variables, the difference is apparently not great enough to affect team scores systematically. Thus, the relative lack of significant correlations for the credibility variables with the dependent variables cannot be explained on the basis of proportions of student scores making up team scores.

The correlations for the questionnaire data are in the expected direction for the two pretest scores (positive, indicating higher pretest errors and opinion discrepancy for teams whose scores include more students). However,

the correlations for both change scores are negative. Since the change scores are post-test minus pretest scores, "better" scores should be negative. Thus, if the presence of a large number of student scores were associated with poor team change scores, the correlations reported here should be positive. With nonsignificant negative correlations, there is no support in these data for the idea that the presence of student scores in the team score is strongly affecting the questionnaire variables. I say "strongly," because with df as low as 13, correlations have to be quite large to achieve statistical significance.*

Altogether, the many methodological difficulties associated with the use of the questionnaire measures suggest that the findings concerning them should be accepted only provisionally. The one exception to this rule is the adult-student differences (Hypothesis 5), which seem robust enough for one to be confident that they would be replicated in other samples.

*When these analyses were repeated, using the questionnaire scores for the more inclusive sample (both interviewed and noninterviewed team members) and correlating them with the number of students making up the team scores, the results were similar. None of the four correlations was statistically significant.

Dependent Variables

The dependent variables in this study, while the most useful available at the time, have some deficiencies which should be noted. First, they were not as independently-derived as would be desirable. While the DARTE Director and the I.S.R. group made their ratings entirely independently, the source of the data was essentially the same in both cases: reports by the participants themselves. This limitation was especially true for the I.S.R. group. Because of his ongoing involvement, the DARTE Director may have had multiple sources of information on the performance of teams, while the researchers were in general limited to data provided by team members. The period of the research team's involvement was considerably shorter than that of the DARTE Director. For the same reasons, however, the DARTE Director may have had an over-optimistic view of team performance which was not shared by the I.S.R. group.

Efforts to collect other more "objective" dependent variable data did not succeed. Nobody in a school district had ever systematically evaluated its local DARTE program (#79). In addition, as reported earlier, not enough Activity Questionnaires (Appendix C) were returned to permit their systematic analysis. Even if used, these questionnaires would still have suffered from the same problem of nonindependence (since team leaders were supposed to complete them).

Ideally, there should be a way of assessing the quantity of programs carried out and weighting the sheer quantity by the number of individuals reached and the intensity (as well as quality) of the contact. Preferably, the information should be sought both from team members and from other more disinterested people who are in a position to know.

While the procedures discussed in this section would certainly be preferable from a methodological point of view, it seems unlikely that the findings would differ very substantially from those reported here, in terms of overall relationships. However, finer distinctions between teams' productivity levels could be made, with a probable increase in precision of the data and discovery of relationships which might have been obscured by the relatively crude nature of the dependent variables as used here.

Studying Communities

Given the apparent importance of community level variables in this study, attention could be given to developing more sophisticated ways of analyzing data at that level. Researchers such as Guttentag (1971) suggest ways of using combined indices to develop profiles of communities on a number of dimensions, a procedure she calls "social area analysis" (p. 91). In her approach, social area analyses would be used as dependent measures, indicators of the effectiveness of social programs in the community. But, as the present study seems to have shown, those same indices can also be used to predict the successfulness of a program.

Using these combined community indices might well increase the predictive power as well as the conceptual clarity of community level variables.

Another approach to studying communities is suggested by Warren (1974). He distinguishes six types of neighborhoods on the basis of three dichotomies: a) whether or not the neightborhood is a positive reference group; b) whether or not the degree of formal and informal organization is high, and 3) whether or not there is a positive or negative orientation to the larger community. He then goes on to show how the six possible types of neighborhoods might react differentially to cope with crises, utilize outside resources, etc. In the present study, some school districts made much better use of their DARTE teams than others. Admittedly, a school district is a much larger and more complex unit of analysis than a neighborhood, and Warren's typology might well require modifications. However, one appealing aspect of Warren's approach is that it gives a meaningful description of community phenomena which is not synonymous with class or ethnicity (Warren, 1974, p. 10). By contrast, many of the community indices used in the present study were simple economic indicators or were highly correlated with economic factors. Data reflecting community dynamics were lacking in the present study. Yet an understanding of these complex forces would seem important to a deep level analysis of why some school districts utilize drug education resources badly and others

very well. Combined with the economic indicators, these variables reflecting community dynamics could result in an increase in our ability to predict team performance.

The Problem of Small Samples

The present study involves a large number of variables, both independent and dependent. This situation would ordinarily call for some of the powerful multivariate statistical techniques which can simplify an otherwise very complex set of relationships. However, in this study the usual unit of analysis was a team, and there were only 28 of them. This number is too low, relative to the number of variables, to permit the use of some techniques which could have been very helpful. For instance, canonical correlation analysis is a method which utilizes a group of intercorrelated independent variables with a group of intercorrelated dependent variables -- exactly the situation in this study. However, there are not enough cases to permit this approach to be used. Fortunately, the sample was large enough to permit the useful multiple regression analyses employed in evaluating Hypothesis 17.

A second difficulty arising from having a small sample is that findings must be quite robust in order to achieve statistical significance. For example, with 26 degrees of freedom, a correlation must be .374 or above to meet the .05 level. Social science data frequently are characterized by rather low correlations. Low correlations, statistically significant because of a large sample size (even though they

may only explain a small portion of the variance), are reported all the time. In the present study there were many near-significant correlations which may have reflected relationships which would have achieved statistical significance in a larger sample.

## Substantive Issues

In this section I will comment on the implications of some of the findings both for programs similar in form to DARTE and for social psychological understanding in general. I will only be able to touch on a few major points, beginning with some comments on the results at each of the three levels of analysis.

### Individual Level

At the individual level of analysis, the absence of sex differences was quite striking. This lack of differences characterized the response both to the questionnaires and to the interview items concerning DARTE. The findings reported in Table XVII (analyses of variance for the interview variables by sex and age) were drawn from a set of 51 such analyses. Of that larger set, six showed sex differences (11%) and 15 showed adult-student differences (29%). Using the lenient standard applied ($p<.10$), this incidence of sex differences is almost exactly what one would expect to occur by chance. Thus, I did not discuss them while evaluating Hypothesis 8, which focused on responses to DARTE as a socializing agent. However, examination of the

larger set of results shows that three of the differences (two of which were significant at the .01 level) were for variables broadly reflective of the effectiveness of DARTE -- the team's ability to develop alternatives to drugs in the community (#19); the use of the DARTE process to train others (#24); and the effectiveness of the team's leadership since training (#31).

Insert Table XXXII about Here

The data in Table XXXII indicate that in all three cases the males gave higher ratings than the females. There may, then, be slight support for the relevance of the agency vs. communion distinction in understanding differential responses to DARTE (see the discussion of Hypothesis 8 in Chapter III). All three of these items seem more "agentic" than communion-oriented in that they refer to activity and accomplishment. However, there are no accompanying differences in which females favor communion-oriented items. The conclusion that Hypothesis 8 was not supported still seems warranted. On the other hand, the data do suggest that a study more directly focused on the agency vs.communion distinction in predicting responses to socialization or the results of that socialization might be fruitful.

Team Level

Hypotheses at the team level were generally supported. Taken together, they seem to provide reinforcement for some of the most basic assumptions of group dynamics theory: the importance of good leadership, the necessity of commitment

to the task, etc. Good team development was strongly related to team performance.

The exception to this pattern of findings was the non-confirmation of Hypothesis 13, which predicted that teams with high status members (in this case, administrators), would be able to get more accomplished than teams without them. Perhaps the students and teachers did not feel comfortable with the administrators and the teams therefore were less cohesive. Another possibility is that the administrators, though high in apparent status, did not have enough real power to make a difference for the teams. In particular, they may have had no more impact than anybody else on how school boards decide to allocate funds. A third possible factor is that administrators, who often have a stake in the status quo, may have exerted a conservative influence on the team, thus slowing down any efforts at inducing change.

Perhaps it should not be surprising to find support for team level variables. In contrast to variables arising from the individual and community levels, the team itself was what might be called the "natural" unit of analysis for these variables. The relationship was a bit less obvious and direct for variables from the other levels.

Community Level

1) The Role of Administrative Support

One of the major conclusions emerging from the community level analyses as well as from the earlier evaluation

report (Horst and BenDor, 1973) was that administrative support for the team is important. Both qualitative and quantitative data supported this finding. However, the apparent importance of administrative support could have been inflated by a process of scapegoating. Team members, having failed to get much accomplished with whatever resources they had, might have been tempted to blame "higher ups" for their own inadequacies. On the other hand, participants were often able to cite specific behaviors on the part of administrators which had blocked the team's progress. If simple scapegoating were occurring, one might not expect to find such specificity in the complaints.

An interesting parallel to this study may be seen in Adams' (1974) interviews with 14 high-level administrators who were responsible for drug education in four different school districts. His respondents expressed needs for: improved communication with the State Board of Education; financial support; and direction and support from the State Board. Thus, in an entirely separate study from the present one, the role of administrators at a higher level than that of the respondents has been found to be important.

2) Comparisons to Programs in other Communities

Examination of drug education programs in other communities can provide a useful supplement to the findings at the community level in the present study. Zide (1973), after reviewing 68 programs in seven states, identified several program characteristics which he concluded were

important for good drug education. Among these were the use of group dynamics techniques, a team approach, and careful selection of participants. The first two characterized DARTE's approach, and the third appeared as a factor which sometimes affected the performance of DARTE teams (Horst and BenDor, 1973). Thus, the DARTE approach seems to contain methods on whose usefulness there is some consensus across a variety of communities. Community programs have often run into problems because youth resent "crash" programs which rely primarily on films, give inaccurate or biased information, or emphasize "scare" techniques (Lasch and Farris, 1972). DARTE eschewed these approaches in its own training and encouraged its teams to do so as well.

It can be particularly instructive in understanding the varied outcomes for DARTE teams to look at the sources of failure or difficulty for other programs. For instance, Faltico (1973) notes that there is often a conflict between "planners" and "doers," those who want to start action quickly. He observed that students often grew impatient before others and dropped out. As reported earlier, the same thing occurred on some DARTE teams. Slawson and Kopacz (1972) provide a fairly comprehensive list of reasons for the failure of voluntary program efforts in approximately 70 New York State communities:

1. Lack of facilities;
2. Already existing services which rendered NGC's (Narcotics Guidance Council's) activities a duplication or unnecessary effort;

3. Difficulties relating to reimbursement from the State and differences in fiscal funding;
4. Problems with recruitment of volunteers;
5. Apathy of adult population;
6. Generally a lack of direction and adequate leadership; and
7. A negative public opinion to the problem of drug education (p. 143).

Several of these issues are familiar already from analysis of the DARTE program. Some are team-level variables, e.g., inadequate leadership (#6, above), or problems with recruitment (#4, above). The rest of the issues relate more to the community, and some parallel those found here. For instance, difficulty with funding for programs (#3, above) was frequently mentioned by participants.

Thus far, comparison with other programs has resulted for the most part in reinforcement for the findings of the present study. At least one study, however, introduces an additional factor, not studied here, which might help explain why some communities were so much more successful than others in utilizing their DARTE teams. Podnos (1972) has identified four typical stages of community response to the drug problem: 1) denial, an "active" effort not to see the problem; 2) realization, perhaps arising from a series of incidents like an overdose death; 3) reaction, characterized by panic at first, then by a flurry of "one-shot" educational activities, erratically increased law enforcement efforts, frightening reports in the media, etc.; and, 4) community action, characterized by a lessening of "hysteria," the use of factual education efforts coordinated

with other programs, etc. The implication for the present study is that communities "mature" enough to be in the fourth stage might be the ones best able to use a DARTE program. This sort of preparedness resembles the "problem-solving attitude" identified earlier as a community resource (Des Jarlais and Horst, 1971). While the institution of a DARTE team might help some school districts move into the fourth stage (one participant explicitly claimed that the DARTE team had "helped stop mass hysteria"), some districts simply may not have been ready for it. Teams might be more effective if they first addressed the level of community readiness, helped the community move into Stage 4, and then planned programs accordingly.

## Concluding Comments

### Implications for Socialization Theory

A number of the hypotheses in this study were derived from theoretical perspectives on the socialization process. This generalization is especially true for the individual level of analysis, where several hypotheses were not confirmed. The methodological difficulties with the knowledge and opinion measures have already been noted. It seems quite possible that the measures did not give an adequate index of the knowledge and attitude components of the socialization by DARTE.

Of course, the teams' capacity to accomplish drug education was the primary behavioral manifestation of DARTE's

effectiveness as a socializing agent. Some factors which are usually important to the socialization of individuals -- e.g., the perceived credibility of the socializing agent -- were not helpful in accounting for the behavior of DARTE teams. In general, socialization theory seems to be better developed for individuals than for groups, which are much more complicated. The particular dynamics of a team had an important effect in determining whether or not the team members would enact the drug educator role modeled by DARTE. The same is true of several school district and community characteristics. The team and community contexts in which the socialization of individuals occurred appear to have had a more powerful effect in determining team outcomes than either the attributes of the socializing agent (DARTE) or the characteristics of the individuals. This conclusion is reminiscent of the argument that situational determinants may be more important than traits in predicting individuals' behavior (Bowers, 1973). The implication for socialization theory is that more systematic ways of accounting for person x situation interactions in predicting socialization outcomes need to be developed.

### Implications for Teams

DARTE teams were composed of cross-age groups of volunteers, all of whom had many other things to do with their time. During the period covered by this study, Wayne County school districts were under considerable stress on many levels, especially financially. Rather than be

impressed with teams' general failure to rise much above a "mediocre" level of activities accomplishment, one might instead be impressed that they accomplished anything at all. Many evaluation reports conclude that the programs studied have no discernible effects (Angrist, 1975).

It is perhaps discouraging that this study appears to have confirmed the old maxim that "the rich get richer" (and accomplish more drug education). Yet some of the findings and other literature reviewed here suggest some potentially more modifiable noneconomic factors (listed below) which are also associated with team success.

One clear conclusion from this study is that team success was generally over-determined; some teams "had all the breaks," while others had none. Comparison of the case studies (Appendix F) for School District Number 5 (a successful team) and Number 21 (a conspicuous failure) illustrates this fact with particular clarity. Number 5 was an economically fortunate community which was already working constructively on the drug abuse problem. Clearly, the community was in Podnos' (1972) Stage 4 (Community Action). The team was cohesive, committed to the task, and had a fairly high degree of student involvement. By contrast, Number 21's team was in a lower middle-class community whose schools were in serious financial trouble. The political climate was unfavorable to drug education; team members were chosen haphazardly; and students dropped out of the team. This community was in Stage 2 (Realization)

and the beginnings of Stage 3 (Reaction), and was still hostile to attempts to grapple realistically with the problem.

The results of this study permit some generalizations about conditions which facilitate the work of teams. Some of the conclusions from the evaluation study (Horst and BenDor, 1973) and other literature on planned change are also useful. What follows is a list of practical implications for the work of change agent teams.

1) DARTE should emphasize the development of positive working relationships and feelings between DARTE staff and team members.

2) DARTE participants should be volunteers and represent a cross-section of occupational roles in the school district (Schindler-Rainman and Lippitt, 1972). They should be made to feel that their role is legitimate and important.

3) Participants should be chosen carefully to include people with a reasonable degree of interpersonal skills, free time, and commitment to the goals of DARTE. Ideally, they should be the kind of people who will sustain commitments they make. Given the number of difficulties encountered by teams, members should also have a high degree of frustration tolerance.

4) Teams should utilize the resources of DARTE in their efforts at team-building. The importance of good

working relationships among team members cannot be overemphasized.

5) Careful consideration should be given to the choice of the team leader. The leader's sex is unimportant, and it also makes no difference whether or not the leader is an administrator. However, the leader must have some organizational skills and enough time to devote to the task. A persuasive rather than directive leadership style (Curtis and Zurcher, 1974) is probably most appropriate.

6) DARTE could do more to encourage teams to work collaboratively with other teams as well as different groups in their own community. More systematic provisions for follow-up consultation would be useful. In addition, DARTE teams might profit from a continuing training design in which the first training period is followed by sessions at intervals of one to several months. All of these practices were utilized in a conspicuously successful program for training community change agents (Schindler-Rainman and Lippitt, 1972).

7) Teams should do everything possible to secure the support of key decision-makers in their respective communities. In the Schindler-Rainman and Lippitt (1972) project, this goal was accomplished in part by incorporating such people into the training design. Teams could act on a similar principle when setting up their own programs.

8) In addition to the procedures mentioned in #7, above, teams should ascertain that a minimum level of administrative support for drug education is available in their community. The basic elements of such support are as follows:

> being willing to give released time to participants for and after training; giving prompt and thoughtful hearing to DARTE team proposals; making every effort to constitute an appropriate team in the first place; and providing support by disseminating information about DARTE training to school personnel and parents. (Horst and BenDor, 1973, p. VIII-19).

Teams which do not have this level of support should recognize that their task will be extremely difficult and should probably set rather modest goals.

9) Teams in communities where the per capita income is low face special challenges. Resources of many kinds are likely to be scarce. It will be important for teams to be able to develop innovative plans which are also inexpensive.

In presenting these generalizations, little reference has been made to drug education, per se. The reason is that these principles should be applicable to other types of programs which utilize volunteer teams of change agents coordinated through a central staff.

Implications for Research

While the present study has helped clarify some of the important factors allowing for prediction of team success, it is by no means definitive. The usual recommendation in this situation is that a study be repeated, systematically varying some of the key independent variables in

order to assess possible cause-effect relationships. Some of the conclusions might first be tested by using an identical procedure for another sample, in the process known as cross-validation. Ideally, a much larger sample (thus allowing canonical correlation analysis) and a more clearly focused selection of independent variables would be recommended. In the laboratory situation such repetition and gradual extension of the scope of studies is the characteristic way of doing research. Unfortunately, this approach seems impossible for a study like the present one.

To start with, collecting the large amount of data needed is not always feasible. People and programs cannot so easily be manipulated. Even if such experimental control were possible, this study could never really be closely replicated because the overall community contexts and especially the general nature of the drug problem and community response to it seem to have changed considerably in the last few years.

Earlier, it was stated that the study should be relevant to some general social psychological principles as well as the specific situation of drug education. The DARTE program was characterized by the use of volunteer teams of change agents who received training and then returned to their communities to try to carry out change-oriented programs. Often, though not always, the team was the first

of its kind in a community. This situation is not unfamiliar in the literature of social change. Thus, the most appropriate test of the conclusions of this study would be to test them in programs which have structural similarities to DARTE but which don't deal with drug education training. If the present findings held up under that scrutiny, it would be safe to conclude that some principles important to understanding voluntary efforts to bring about social change had been identified.

Table I

| | Mean | Standard Deviation | Range |
|---|---|---|---|
| team development - ISR rating | 1.53 | .84 | 1-4 |
| activities accomplishment ISR rating | 1.61 | .79 | 1-4 |
| team development - DARTE Director's rating | 2.57 | 1.03 | 1-4 |
| activities accomplishment - DARTE Director's rating | 3.04 | 1.23 | 1-5 |
| impact on schools - participants' rating (#73) | 2.74 | .81 | 1.0-3.8 |
| impact on community - participants' rating (#74) | 2.04 | .69 | 1.0-3.3 |
| team could develop alternatives to drug abuse (#19) | 2.33 | .70 | 1.0-3.7 |
| team used process similar to DARTE's (#24) | 2.82 | 1.07 | 1.0-4.6 |

Descriptive statistics for Dependent Variables for DARTE teams.

Numbers in parentheses are the question numbers in the interview (Appendix E). N = 28; possible scale is 1 - 5 throughout, with 5 being the high end.

Table II

| | team development I.S.R. | activities I.S.R. | team DARTE | activities DARTE |
|---|---|---|---|---|
| team development - ISR rating | - | a | b | c |
| activities accomplishment - ISR rating | a).613** | - | h | i |
| team development - DARTE Director's rating | b).446* | h).560** | - | n |
| activities accomplishment - DARTE Director's rating | c).447* | i).589** | n).856** | - |
| impact on schools - participants' rating (#73) | d).294 | j).473* | o).485** | s).528** |
| impact on community - participants' rating (#74) | e).151 | k).258 | p).437* | t).482** |
| team could develop alternatives to drug abuse (#19) | f).165 | l).453* | q).661** | u).660** |
| team used process similar to DARTE's (#24) | g).486** | m).626** | r).560** | v).560** |

Intercorrelations of the Dependent Variables.

Only the 24 district, nontrivial correlations are shown, the repeats being designated by a letter showing where they first appeared in the table. N = 28. To be significant at the .05 level, r must exceed .374;to be significant at the .01 level, r must exceed .479, for 26 df

* significant at .05 level
** significant at .01 level

(continued)

Table II, continued

| | impact schools | impact community | develop alternatives | DARTE Process |
|---|---|---|---|---|
| team development - ISR rating | d | e | f | g |
| activities accomplishment - ISR rating | j | k | l | m |
| team development - DARTE Director's rating | o | p | q | r |
| activities accomplishment - DARTE Director's rating | s | t | u | v |
| impact on schools - participants' rating (#73) | - | w | x | y |
| impact on community - participants' rating (#74) | w).685** | - | z | aa |
| team could develop alternatives to drug abuse (#19) | x).754** | z).638** | - | bb |
| team used process similar to DARTE's (#24) | y).773** | aa).516** | bb).709** | - |

Table III

| | r |
|---|---|
| team development - ISR rating | .175 |
| activities accomplishment - ISR rating | .320 |
| team development - DARTE Director's rating | .336 |
| activities accomplishment - DARTE Director's rating | .491** |
| impact on schools - participant's rating (#73) | .516** |
| impact on community participants' rating (#74) | .380* |
| team could develop alternatives to drug abuse (#19) | .432* |
| team used process similar to DARTE's (#24) | .360 |

Correlations of "helpfulness of DARTE training staff" with dependent variables.

N = 28. To be significant at the .05 level, r must exceed .374; to be significant at the .01 level, r must exceed .479, for 26 df.

* significant at .05 level
** significant at .01 level

Table IVa

| | $\bar{x}$ | $s^2$ | r | P |
|---|---|---|---|---|
| team development - ISR rating | 1.76 | .82 | .213 | .412 |
| activities accomplishment - ISR rating | 1.76 | .69 | -.215 | .408 |
| team development - DARTE Director's rating | 3.00 | .88 | -.224 | .388 |
| activities accomplishment - DARTE Director's rating | 3.59 | .76 | -.103 | .695 |
| impact on schools - participant's rating (#73) | 2.96 | .55 | -.477 | .053 |
| impact on community participants' rating (#74) | 2.14 | .45 | -.087 | .739 |
| team could develop alternatives to drug abuse (#19) | 2.51 | .52 | -.369 | .145 |
| team used process similar to DARTE's (#24) | 2.97 | .98 | -.327 | .201 |

Correlations with Dependent Variables of Teams' Pre-test Discrepancy Scores on the Opinion Inventory -- Interview Sample.

N = 17, $\bar{x}$ = 27.37, $s^2$ = 25.02, for the independent variable. Means and variances for the dependent variables are shown with each correlation and its significance level for 15 df.

Table IVb

| | $\bar{x}$ | $s^2$ | r | p |
|---|---|---|---|---|
| team development - ISR rating | 1.57 | .71 | .044 | .841 |
| activities accomplishment - ISR rating | 1.61 | .61 | -.148 | .500 |
| team development - DARTE Director's rating | 2.65 | 1.05 | -.118 | .593 |
| activities accomplishment - DARTE Director's rating | 3.13 | 1.39 | -.107 | .627 |
| impact on schools - participants' rating (#73) | 2.79 | .67 | -.148 | .502 |
| impact on community - participants' rating (#74) | 2.01 | .45 | -.058 | .793 |
| team could develop alternatives to drug abuse (#19) | 2.32 | .58 | -.185 | .398 |
| team used process similar to DARTE's (#24) | 2.87 | 1.12 | -.096 | .665 |

Correlation with Dependent Variables of Teams' Pretest Discrepancy Scores on the Opinion Inventory -- Inclusive Sample.

All available team members' scores used, whether or not team members were in the interview sample. N = 23, $\bar{x}$ = 28.24, $s^2$ = 13.59, for the independent variable. Means and variances for the dependent variables are shown with each correlation and its significance level for 21 df.

Table V

| | drug information | legal aspects | social aspects |
|---|---|---|---|
| | r | r | r |
| team development - ISR rating | -.001 | .044 | .241 |
| activities accomplishment - ISR rating | -.058 | -.109 | .238 |
| team development - DARTE Director's rating | -.039 | .149 | .011 |
| activities accomplishment - DARTE Director's rating | .241 | .141 | .348 |
| impact on schools - participants' rating (#73) | .356 | .240 | .420* |
| impact on community - participants' rating (#74) | .132 | .175 | .208 |
| team could develop alternatives to drug abuse (#19) | .067 | .101 | .262 |
| team used process similar to DARTE's (#24) | .049 | .074 | .301 |

Correlations of Dependent Variables with Credibility Variables.

Teams' ratings of the accuracy of DARTE's information: about drugs (#9); the legal aspects of drug abuse (#10); and the social aspects of drug abuse (#11). N = 28. To be significant at the .05 level, r must exceed .374; to be significant at the .01 level, r must exceed .479, for 26 df.

* significant at .05 level
** significant at .01 level

Table VIa

| | $\bar{x}$ | $s^2$ | r | p |
|---|---|---|---|---|
| team development - ISR rating | 1.71 | .84 | .021 | .945 |
| activities accomplishment - ISR rating | 1.64 | .40 | -.204 | .484 |
| team development - DARTE Director's rating | 2.86 | .75 | -.379 | .181 |
| activities accomplishment - DARTE Director's rating | 3.43 | .42 | -.102 | .727 |
| impact on schools - participants' rating (#73) | 2.94 | .60 | -.830 | .0002 |
| impact on community - participants' rating (#74) | 2.14 | .39 | -.531 | .051 |
| team could develop alternatives to drug abuse (#19) | 2.50 | .48 | -.468 | .091 |
| team used process similar to DARTE's (#24) | 3.10 | .94 | -.537 | .048 |

Correlations of Dependent Variables with Mean Errors on Pretest for the Drug Knowledge Inventory—Interview Sample.

N = 14. $\bar{x}$ = 7.42, $s^2$ = 3.00 for the independent variable. Means and variances for the dependent variables are shown with each correlation and its significance level for 12 df.

Table VIb

| | $\bar{x}$ | $s^2$ | r | p |
|---|---|---|---|---|
| team development - ISR rating | 1.67 | .81 | .019 | .947 |
| activities accomplishment - ISR rating | 1.60 | .40 | -.290 | .295 |
| team development - DARTE Director's rating | 2.80 | .74 | -.250 | .369 |
| activities accomplishment - DARTE Director's rating | 3.40 | .40 | .008 | .979 |
| impact on schools - participants' rating (#73) | 2.90 | .59 | -.511 | .052 |
| impact on community - participants' rating (#74) | 2.13 | .36 | -.177 | .527 |
| team could develop alternatives to drug abuse (#19) | 2.47 | .47 | -.284 | .305 |
| team used process similar to DARTE's (#24) | 3.07 | .88 | -.420 | .120 |

Correlations of Dependent Variables with Errors on Pretest for the Drug Knowledge Inventory—Inclusive Sample.

N = 15. $\bar{x}$ = 8.05, $s^2$ = 2.18 for the independent variable. Means and variances for the dependent variables are shown with each correlation and its significance level for 13 df.

Table VIIa

| | $\bar{x}$ | $s^2$ | r | p |
|---|---|---|---|---|
| team development - ISR rating | 1.71 | .84 | .117 | .692 |
| activities accomplishment - ISR rating | 1.64 | .40 | .562 | .037 |
| team development—DARTE Director's rating | 2.86 | .75 | .120 | .682 |
| activities accomplishment - DARTE Director's rating | 3.43 | .42 | -.016 | .958 |
| impact on schools - participants' rating (#73) | 2.94 | .60 | .599 | .024 |
| impact on community - participants' rating (#74) | 2.14 | .39 | .542 | .045 |
| team could develop alternatives to drug abuse (#19) | 2.50 | .48 | .352 | .217 |
| team used process similar to DARTE's (#24) | 3.10 | .94 | .560 | .038 |

Correlations of Dependent Variables with Mean Change Scores in Errors in the Drug Knowledge Inventory—Interview Sample.

N = 14. $\bar{x}$ = -.88, $s^2$ = 1.17 for the independent variable. Means and variances for the dependent variables are shown with each correlation and its significance level for 12 df.

Table VIIb

| | $\bar{x}$ | $s^2$ | r | p |
|---|---|---|---|---|
| team development - ISR rating | 1.67 | .81 | .003 | .993 |
| activities accomplishment - ISR rating | 1.60 | .40 | .366 | .180 |
| team development - DARTE Director's rating | 2.80 | .74 | -.011 | .968 |
| activities accomplishment - DARTE Director's rating | 3.40 | .40 | -.054 | .849 |
| impact on schools - participants' rating (#73) | 2.90 | .59 | .260 | .350 |
| impact on community - participants' rating (#74) | 2.13 | .36 | .238 | .393 |
| team could develop alternatives to drug abuse (#19) | 2.47 | .47 | .155 | .582 |
| team used process similar to DARTE's (#24) | 3.07 | .88 | .330 | .229 |

Correlations of Dependent Variables with Mean Change Scores in Errors on the Drug Knowledge Inventory—Inclusive Sample.

N = 15. $\bar{x}$ = -.95, $s^2$ = 1.21 for the independent variable. Means and variances for the dependent variables are shown with each correlation and its significance level for 13 df.

Table VIIIa

| | $\bar{x}$ | $s^2$ | r | p |
|---|---|---|---|---|
| team development - ISR rating | 1.60 | .69 | -.576 | .025 |
| activities accomplishment - ISR rating | 1.60 | .40 | .068 | .809 |
| team development - DARTE Director's rating | 2.87 | .84 | .362 | .185 |
| activities accomplishment - DARTE Director's rating | 3.47 | .70 | .412 | .127 |
| impact on schools - participants' rating (#73) | 2.89 | .56 | .334 | .224 |
| impact on community - participants' rating (#74) | 2.09 | .48 | .115 | .685 |
| team could develop alternatives to drug abuse (#19) | 2.54 | .58 | .526 | .044 |
| team used process similar to DARTE's (#24) | 2.83 | .94 | .235 | .398 |

Correlations of Dependent Variables with Changes in Team Discrepancy from an "Ideal Score" on Opinion Inventory—Interview Sample.

N = 15, $\bar{x}$ = -6.31, $s^2$ = 18.65, for the independent variable. Means and variances for the dependent variables are shown with each correlation and its significance level for 13 df.

Table VIIIb

| | $\bar{x}$ | $s^2$ | r | p |
|---|---|---|---|---|
| team development - ISR rating | 1.57 | .71 | -.161 | .463 |
| activities accomplishment - ISR rating | 1.61 | .61 | .050 | .820 |
| team development - DARTE Director's rating | 2.65 | 1.06 | .005 | .981 |
| activities accomplishment - DARTE Director's rating | 3.13 | 1.39 | .119 | .588 |
| impact on schools - participants' rating (#73) | 2.79 | .67 | .155 | .479 |
| impact on community - participants' rating (#74) | 2.01 | .447 | .145 | .510 |
| team could develop alternatives to drug abuse (#19) | 2.32 | .58 | .120 | .587 |
| team used process similar to DARTE's (#24) | 2.87 | 1.12 | .203 | .352 |

Correlations of Dependent Variables with Changes in Team Discrepancy from an "Ideal Score" on Opinion Inventory—Inclusive Sample.

N = 23, $\bar{x}$ = 4.50, $s^2$ = 16.65, for the independent variable. Means and variances for the dependent variables are shown with each correlation and its significance level for 21 df.

Table IXa

| | Knowledge change score missing | Knowledge change score present | t | p |
|---|---|---|---|---|
| team development - ISR rating | 1.36 (.55) | 1.71 (.84) | -1.133 | .267 |
| activities accomplishment - ISR rating | 1.57 (.88) | 1.64 (.40) | -.236 | .815 |
| team development - DARTE Director's rating | 2.29 (1.30) | (2.86) (.75) | -1.496 | .147 |
| activities accomplishment - DARTE Director's rating | 2.64 (2.40) | 3.43 (.42)* | -1.751 | .092 |
| impact on schools - participants' rating (#73) | 2.53 (.66) | 2.94 (.60) | -1.382 | .179 |
| impact on community - participants' rating (#74) | 1.94 (.58) | 2.14 (.39) | -.761 | .454 |
| team could develop alternatives to drug abuse (#19) | 2.15 (.48) | 2.50 (.48) | -1.333 | .194 |
| team used process similar to DARTE's (#24) | 2.54 (1.27) | 3.10 (.94) | -1.40 | .173 |

t-tests on Dependent Variables for Differences between Teams missing vs. not missing Change Data on the Drug Knowledge Inventory.

df = 26 throughout. Means for each group are shown along with the variance (in parentheses), the t for the difference between the means, and the associated probability levels. An asterisk (*) designates instances in which an F-Statistic for the difference between the variances was significant at .05 or less, thus violating the assumption of equality of variances on which the t-test is based.

Table IXb

| | Opinion Discrepancy Change Score Missing | Opinion Discrepancy Change Score NOT Missing | t | p |
|---|---|---|---|---|
| team development - ISR rating | 1.46 (.77) | 1.60 (.69) | -.429 | .671 |
| activities accomplishment - ISR rating | 1.62 (.92) | 1.60 (.40) | .051 | .960 |
| team development - DARTE Director's rating | 2.23 (1.19) | 2.87 (.84) | -1.677 | .106 |
| activities accomplishment - DARTE Director's rating | 2.54 (2.10) | 3.47 (.70)* | -2.110 | .044 |
| impact on schools - participants' rating (#73) | 2.56 (.75) | 2.89 (.56) | -1.067 | .296 |
| impact on community - participants' rating (#74) | 1.99 (.51) | 2.09 (.48) | -.355 | .725 |
| team could develop alternatives to drug abuse (#19) | 2.08 (.32) | 2.54 (.58) | -1.805 | .083 |

t-tests on Dependent Variables for Differences between Teams missing vs. not missing discrepancy Change Data on the Opinion Inventory.

df = 26 throughout. Means for each group are shown along with the variance (in parentheses), the t for the difference between the means, and the associated probability levels. An asterisk (*) designates instances in which an F-statistic for the difference between the variances was significant at .05 or less, thus violating the assumption of equality of variances on which the t-test is based.

Table X

Analysis of Variance by Age and Sex of Pretest Errors on Drug Knowledge Inventory

| Source | df | Sum of Sqrs. | Mean Sqr. | F-Statistic | Signif. |
|---|---|---|---|---|---|
| Between | 3 | 859.74 | 286.58 | 29.688 | .0000 |
| Within | 103 | 994.26 | 9.6531 | | |
| Total | 106 | 1854.0 | | | |

Equality of Variances: df = 3, 15998. F = .86396 .4589

| Strata | N | Mean | Variance | Std. Dev |
|---|---|---|---|---|
| Adult Males | 19 | 4.8947 | 6.4327 | 2.5363 |
| Student Males | 26 | 10.654 | 12.635 | 3.5546 |
| Adult Females | 40 | 5.7500 | 8.6538 | 2.9417 |
| Student Females | 22 | 11.636 | 10.719 | 3.2739 |
| Grand | 107 | 8.0000 | 17.491 | 4.1822 |

| | Contrast | Multiple Comparison | | Scheffe Allowances | |
|---|---|---|---|---|---|
| | Observed | Predicted | F-Stat | Signif. Lev=.9500 | |
| Adult vs. Student | -11.645 | -0. | 86.966 | .0000 | 3.5493 |
| Male vs. Female | -1.8378 | -0. | 2.1658 | .1442 | 3.5493 |
| Interaction | .12725 | -0. | 0.0138 | .9190 | 3.5493 |

Table XI

Analysis of Variance by Age and Sex of Change Scores on Drug Knowledge Inventory

| Source | df | Sum of Sqrs. | Mean Sqr. | F-Statistic | Signif. |
|---|---|---|---|---|---|
| Between | 3 | 17.106 | 5.7019 | .62708 | .5991 |
| Within | 103 | 936.56 | 9.0982 | | |
| Total | 106 | 953.66 | | | |

Equality of Variances: df = 3, 15998. F= .81616 .4847

| Strata | N | Mean | Variance | Std. Dev. |
|---|---|---|---|---|
| Adult Males | 19 | -.21053 | 5.6199 | 2.3706 |
| Student Males | 26 | -1.0000 | 10.480 | 3.2373 |
| Adult Females | 40 | -.95000 | 8.7667 | 2.9609 |
| Student Females | 22 | -1.5000 | 11.024 | 3.3202 |
| Grand | 107 | -.94393 | 8.9968 | 2.9995 |

| | Contrast | Multiple Comparison | | Scheffe Allowances | |
|---|---|---|---|---|---|
| | Observed | Predicted | F-Stat | Signif. | Lev=.9500 |
| Adult vs. Student | 1.3395 | -0. | 1.2214 | .2717 | 3.4448 |
| Male vs Female | 1.2395 | -0. | 1.0459 | .3089 | 3.4448 |
| Interaction | .23947 | -0. | .0390 | .8438 | 3.4448 |

Table XII

Analysis of Covariance by Age and Sex of Post-Test Errors on Drug Knowledge Inventory (Pretest Score as Covariate)

| Source | df | Sum of Sqrs. | Mean Sqr. | F-Statistic | Signif. |
|---|---|---|---|---|---|
| Equality of Adj. Cell Means | 3 | 53.614 | 17.871 | 2.4010 | .0721 |
| Zero Slope | 1 | 331.77 | 331.77 | 44.574 | |
| Error | 102 | 759.21 | 7.4432 | | |
| Equality of Means (w/o Covariates) | 3 | 694.68 | 231.56 | 21.862 | .0000 |
| Error | 103 | 1091.0 | 10.592 | | |
| Equality of Slopes | 3 | 48.899 | 16.300 | 2.2718 | .0849 |
| Regressions | 6 | 102.51 | 17.086 | 2.3813 | .0343 |
| Error | 99 | 710.31 | 7.1748 | | |

Table of Coefficients

| Covariate | Coeff. | Std. Err. | T-Statistic | Signif. |
|---|---|---|---|---|
| Pretest Error | .57766 | .08652 | 6.6764 | .0000 |

Table of Means

| | Adult Male | Student Male | Adult Female | Student Female |
|---|---|---|---|---|
| Stratum Mean | 4.6842 | 9.6538 | 4.8000 | 10.136 |
| Adj. Mean | 6.4780 | 8.1208 | 6.0997 | 8.0358 |
| (Std. Error) | .68113 | .58224 | .47326 | .66130 |
| Intercept | 1.8567 | 3.4996 | 1.4785 | 3.4145 |
| Sample Size | 19 | 26 | 40 | 22 |
| Coefficient Constant | 2.1323 | .55144 | 3.0111 | 2.9459 |
| DKI Pretest | .52136 | .85438 | .31111 | .61793 |
| (Std. Error) | 2.0953 | 3.2615 | 2.1869 | 3.1515 |
| R-Sqr. | .29663 | .47456 | .15236 | .30201 |
| Signif. | .0159 | .0001 | .0128 | .0081 |

(continued)

Table XII (cont'd)

| | Contrast Observed | Multiple Comparison Predicted | T-Stat. | Sig. | Scheffe Allowances Lev=9500 |
|---|---|---|---|---|---|
| Adult vs. Student | -3.5789 | -0. | -2.4033 | .0181 | 4.2334 |
| Male vs. Female | .46330 | -0. | .41813 | .6767 | 3.1498 |
| Interaction | .29322 | -0. | .26739 | .7897 | 3.1174 |

Table XIII

Analysis of Variance by Age and Sex of Pretest Discrepancy Score on Opinion Inventory

| Source | df | Sum of Sqrs. | Mean Sqr. | F-Statistic | Signif. |
|---|---|---|---|---|---|
| Between | 3 | 1433.4 | 477.81 | 12.366 | .0000 |
| Within | 107 | 4134.3 | 38.638 | | |
| Total | 110 | 5567.7 | | | |

Equality of Variances: df = 3, 17765. F = .30158 .8243

| Strata | N | Mean | Variance | Std. Dev. |
|---|---|---|---|---|
| Adult Males | 27 | 25.074 | 37.840 | 6.1515 |
| Student Males | 26 | 33.962 | 34.998 | 5.9159 |
| Adult Females | 39 | 25.641 | 44.920 | 6.7023 |
| Student Females | 19 | 29.842 | 31.585 | 5.6200 |
| Grand | 111 | 28.171 | 50.616 | 7.1145 |

| | Contrast Observed | Multiple Comparison Predicted | F-Stat. | Scheffe Allowances Signif. | Lev=.9500 |
|---|---|---|---|---|---|
| Adult vs. Student | -13.089 | -0. | 28.833 | .0000 | 6.9238 |
| Male vs. Female | 3.5525 | -0. | 2.1241 | .1479 | 6.9238 |
| Interaction | -4.6864 | -0. | 3.6964 | .0572 | 6.9238 |

Table XIV

Analysis of Variance by Age and Sex of Change Scores on Opinion Inventory

| Source | df | Sum of Sqrs. | Mean Sqr. | F-Statistic | Signif. |
|---|---|---|---|---|---|
| Between | 3 | 212.83 | 70.942 | 1.0552 | .3714 |
| Within | 107 | 7193.7 | 67.231 | | |
| Total | 110 | 7406.6 | | | |

Equality of Variances: df = 3, 17765 F = 4.0848 .0066

| Strata | N | Mean | Variance | Std. Dev. |
|---|---|---|---|---|
| Adult Male | 27 | -5.0370 | 43.960 | 6.6302 |
| Student Male | 26 | -6.5000 | 64.820 | 8.0511 |
| Adult Female | 39 | -5.1795 | 45.309 | 6.7312 |
| Student Female | 19 | -2.1579 | 150.47 | 12.267 |

| | Contrast Observed | Multiple Comparison Predicted | F-Stat. | Scheffe Allowances Signif. Lev=.9500 | |
|---|---|---|---|---|---|
| Adult vs. Student | -1.5586 | -0. | .23499 | .6288 | 9.1331 |
| Male vs. Female | -4.1997 | -0. | 1.7060 | .1943 | 9.1331 |
| Interaction | 4.4846 | -0. | 1.9453 | .1660 | 9.1331 |

Table XV

Analysis of Covariance by Age and Sex of Post-Test Discrepancy Score on Opinion Inventory (Pretest Score as Covariate)

| Source | df | Sum of Sqrs. | Mean Sqr. | F-Statistic | Signif. |
|---|---|---|---|---|---|
| Equality of Adj. Cell Means | 3 | 643.04 | 214.35 | 4.5125 | .0051 |
| Zero Slope | 1 | 318.16 | 318.16 | 6.6981 | .0110 |
| Error | 106 | 5035.1 | 47.501 | | |
| Equality of Means (w/o Covariates) | 3 | 1416.7 | 472.23 | 9.4389 | .0000 |
| Error | 107 | 5353.2 | 50.030 | | |
| Equality of Slopes | 3 | 126.69 | 42.231 | .88620 | .4509 |
| Regressions | 6 | 769.73 | 128.29 | 2.6921 | .0181 |
| Error | 103 | 4908.4 | 47.654 | | |

Table of Coefficients

| Covariate | Coefficient | Std. Err. | T-Statistic | Signif. |
|---|---|---|---|---|
| Pretest Discrepancy Score | .27741 | .10719 | 2.5881 | .0110 |

Table of Means and Regressions

| | Adult Male | Student Male | Adult Female | Student Female |
|---|---|---|---|---|
| Stratum Mean | 20.037 | 27.462 | 20.462 | 27.684 |
| Adj. Mean | 20.896 | 25.855 | 21.163 | 27.221 |
| (Std Error) | 1.3673 | 1.4873 | 1.1364 | 1.5913 |
| Intercept | 13.081 | 18.040 | 13.348 | 19.406 |
| N | 27 | 26 | 39 | 19 |
| Constant | 10.151 | 12.966 | 13.575 | 31.513 |
| O.I.Pretest | .39429 | .42683 | .26858 | -.12831 |
| (Std. Error) | 5.5929 | 7.4528 | 4.6747 | 10.805 |
| R-Sqr. | .16360 | .10681 | .13216 | .00469 |
| Signif | .0364 | .1032 | .0229 | .7805 |

(continued)

Table XV (cont'd)

| | Contrast Observed | Multiple Comparison Predicted | F-Stat. | Scheffe Allowances Signif. Lev.=.9500 | |
|---|---|---|---|---|---|
| Adult v. Student | -11.016 | -0. | 13.068 | .0005 | 8.6508 |
| Male vs. Vemale | -1.6327 | -0. | .35784 | .5510 | 7.7538 |
| Interaction | 1.0982 | -0. | .15961 | .6903 | 7.8095 |

Table XVI

Analysis of Variance by Age and Sex of Accuracy of Drug Information (#9)

| Source | df | Sum of Sqrs. | Mean Sqr. | F-Statistic | Signif. |
|---|---|---|---|---|---|
| Between | 3 | 3.7998 | 1.2666 | 2.6910 | .0486 |
| Within | 141 | 66.366 | .47068 | | |
| Total | 144 | 70.166 | | | |

Equality of Variances: df = 3 , 22567 F = 1.8036 .1441

| Stratum | N | Mean | Variance | Std. Dev. |
|---|---|---|---|---|
| Student Male | 21 | 4.3333 | .63333 | .79582 |
| Student Female | 21 | 4.2381 | .49048 | .70034 |
| Adult Male | 42 | 4.4048 | .58827 | .76699 |
| Adult Female | 61 | 4.6557 | .32951 | .57403 |

| | Contrast | Multiple Comparison | | Scheffe Allowances | |
|---|---|---|---|---|---|
| | Observed | Predicted | T-Stat. | Signif. | Lev.=.9500 |
| Male vs. Female | -.15574 | -0. | -.61682 | .5384 | .71442 |
| Adult vs. Student | -.48907 | -0. | -1.9370 | .0547 | .71442 |
| Interaction | .34621 | -0. | 1.3712 | .1725 | .71442 |

Table XVII

Summary of Findings for Analyses of Variance on Selected Interview Questions.

Each item shows the question number, abbreviated question content, means for the 4 groups (SM = student males; SF = student females; AM = adult males; AF = adult females) along with the standard deviation and N for each group. Also shown are the overall F for the one-way analysis of variance, observed differences in the specified contrasts, and the significance of the t-test for the contrast. An asterisk (*) indicates that an F testing the difference between the variances was significant at the .05 level or less, thus violating the assumption of common variance on which the analysis of variance is based.

Table XVII

| item number | item content (abbreviated) | | means SM | SF | AM | AF | differences observed | significance of t-tests |
|---|---|---|---|---|---|---|---|---|
| 9 | accuracy drug information | $\bar{x}$ | 4.33 | 4.24 | 4.40 | 4.66 | adults > students | .055 |
| | | s.d. | (.80) | (.70) | (.77) | (.57) | | |
| | | N | (21) | (21) | (42) | (61) | | |
| | | overall F=2.69, p=.049 (3,141 df) | | | | | | |
| 10 | accuracy - legal information | | 4.24 | 3.86 | 4.07 | 4.20 | - | - |
| | | | (.89) | (1.31) | (.89) | (.79)* | | |
| | | | (21) | (21) | (42) | (60) | | |
| | | overall F n.s. | | | | | | |
| 11 | accuracy - social information | | 3.33 | 3.71 | 3.78 | 3.96 | adults > students | .056 |
| | | | (1.11) | (.85) | (.98) | (1.01) | | |
| | | | (21) | (21) | (42) | (60) | | |
| | | overall F=2.15, p=.096 (3,140 df) | | | | | | |
| 12 | helpfulness of DARTE staff | | 4.33 | 4.33 | 4.57 | 4.56 | adults > students | .087 |
| | | | (.86) | (.91) | (.63) | (.67) | | |
| | | | (21) | (21) | (42) | (61) | | |
| | | overall F n.s. | | | | | | |
| 13 | helpfulness - values clarification | | 3.90 | 3.76 | 3.93 | 4.25 | - | - |
| | | | (1.18) | (1.14) | (1.07) | (1.03) | | |
| | | | (21) | (21) | (42) | (59) | | |
| | | overall F n.s. | | | | | | |
| 14 | helpfulness communication activities (personal) | | 3.14 | 3.62 | 3.55 | 3.70 | - | - |
| | | | (1.39) | (1.12) | (1.15) | (1.07) | | |
| | | | (21) | (21) | (40) | (61) | | |
| | | overall F n.s. | | | | | | |
| 15 | helpfulness communications activities (team) | | 3.95 | 3.86 | 3.83 | 3.61 | - | - |
| | | | (.97) | (1.01) | (.86) | (1.08) | | |
| | | | (19) | (21) | (41) | (57) | | |
| | | overall F n.s. | | | | | | |

(continued)

Table XVII (cont'd)

| item number | item content (abbreviated | SM | SF | AM | AF | differences observed | significance of t-tests |
|---|---|---|---|---|---|---|---|
| 16 | training to work with others (personal) | 3.76 (1.09) (21) | 3.60 (1.50) (20) | 3.83 (1.05) (41) | 3.62 (1.17) (60) | - | - |
| | | overall F n.s. | | | | | |
| 17 | training to work with others (team) | 3.95 (1.13) (19) | 3.80 (1.29) (21) | 3.85 ( .96) (41) | 3.75 (1.02) (60) | - | - |
| | | overall F n.s. | | | | | |
| 18 | helpfulness of training re alternatives | 2.35 (1.35) (20) | 2.57 (1.50) (21) | 2.70 (1.29) (40) | 3.00 (1.49) (59) | - | - |
| | | overall F n.s. | | | | | |
| 22 | personal commitment to action plan | 3.48 (1.40) (21) | 4.00 (1.14) (21) | 4.33 ( .79) (42) | 4.14 (1.24)* (61) | adults > students interaction (males at the extremes) | .018 .092 |
| | | overall F=2.78, p=.044 (3,141 df) | | | | | |
| 23 | team commitment to action plan | 3.48 (1.33) (21) | 3.81 (1.17) (21) | 3.60 ( .83) (42) | 3.52 (1.31)* (60) | - | - |
| | | overall F n.s. | | | | | |
| 73 | DARTE impact on schools | 2.65 (.93) (20) | 2.33 (1.35) (21) | 3.07 (1.05) (42) | 2.75 (1.27) (59) | adults > students | .059 |
| 74 | DARTE impact on community | 1.81 (1.03) (21) | 1.67 (1.11) (21) | 2.49 (1.12) (41) | 2.02 (1.08) (55) | adults > students | .012 |
| | | overall F=3.41, p=.020 (3,134 df) | | | | | |

Table XVIII

| | team development ISR | team development DARTE |
|---|---|---|
| team development - ISR rating | - | -b- |
| activities accomplishment - ISR rating | a).613** | h).560** |
| team development - DARTE Director's rating | b).446* | - |
| activities accomplishment - DARTE Director's rating | c).447* | i).856** |
| impact on schools - participants' rating (#73) | d).294 | j).485** |
| impact on community - participants' rating (#74) | e).151 | k).437* |
| team could develop alternatives to drug abuse (#19) | f).165 | l).661** |
| team used process similar to DARTE's (#24) | g).486** | m).560** |

Correlations of Two Team Development Variables with Dependent Variables.

Team development rated by the I.S.R. group; team development rated by the DARTE Director. Only the 13 distinct nontrivial correlations are shown, the repeat being designated by a letter showing where it first appears in the table. N = 28. To be significant at the .05 level r must exceed .374; to be significant at the .01 level, r must exceed .479, for 26 df.

* significant at .05 level
** significant at .01 level

Table XIX

| | r |
|---|---|
| team development - ISR rating | .611** |
| activities accomplishment - ISR rating | .604** |
| team development - DARTE Director's rating | .477* |
| activities accomplishment - DARTE Director's rating | .338 |
| impact on schools - participants' rating (#73) | .331 |
| impact on community - participants' rating (#74) | .153 |
| team could develop alternatives to drug abuse (#19) | .448* |
| team used process similar to DARTE's (#24) | .492** |

Correlations of Student Involvement with Dependent Variables.

Author's rating from team interview protocols. N = 28. $\bar{x}$ = 2.68, s.d. = 1.36, on a 5 point scale. To be significant at the .05 level r must exceed .374; to be significant at the .01 level, r must exceed .479, for 26 df.

* significant at .05 level
** significant at .01 level

Table XX

| | communications activities r | work with others of different backgrounds r |
|---|---|---|
| team development - ISR rating | a).268 | j).386* |
| activities accomplishment - ISR rating | b)-.057 | k).114 |
| team development - DARTE Director's rating | c).068 | l)-.013 |
| activities accomplishment - DARTE Director's rating | d).033 | m).056 |
| impact on schools - participants' rating (#73) | e).237 | n).386* |
| impact on community - participants' rating (#74) | f).118 | o).129 |
| team could develop alternatives to drug abuse (#19) | g).025 | p).194 |
| team used process similar to DARTE's (#24) | h).251 | q).441* |
| helpfulness of communications activities to team (#15) | - | -i- |
| helpfulness to team of training on working with others (#17) | i).644** | — |

Correlations of Team Communication Variables with Each Other and Dependent Variables.

"Helpfulness of communication activities to team" (#15) and "helpfulness of training on working with others of different backgrounds" (#17). Correlations are shown, the repeat being designated by a letter showing where it first appeared in the table. To be significant at the .05 level r must exceed .374; to be significant at the .01 level r must exceed .479, for 26 df.

* significant at .05 level
** significant at .01 level

Table XXI

| | leader at end of training | leader effectiveness since training |
|---|---|---|
| team development - ISR rating | .309 | .313 |
| activities accomplishment - ISR rating | .354 | .407* |
| team development - DARTE Director's rating | .333 | .437* |
| activities accomplishment - DARTE Director's rating | .314 | .534** |
| impact on schools - participants' rating (#73) | .429* | .622** |
| impact on community - participants' rating (#74) | .160 | .368 |
| team could develop alternatives to drug abuse (#19) | .411* | .452* |
| team used process similar to DARTE's (#24) | .472 | .615* |

Correlations of Leadership Variables with Dependent Variables.

"Satisfaction with the team leader at the end of training" (#30) and "effectiveness of the leadership of the team since DARTE training" (#31). N = 28. To be significant at the .05 level, r must exceed .374; to be significant at the .01 level r must exceed .479, for 26 df.

* significant at .05 level
** significant at .01 level

Table XXII

| | personal commitment | team commitment |
|---|---|---|
| team development - ISR rating | .266 | .363 |
| activities accomplishment - ISR rating | .254 | .375* |
| team development - DARTE Director's rating | .238 | .517** |
| activities accomplishment - DARTE Director's rating | .364 | .490** |
| impact on schools - participants' rating (#73) | .230 | .367 |
| impact on community - participants' rating (#74) | .081 | .299 |
| team could develop alternatives to drug abuse (#19) | .200 | .346 |
| team used process similar to DARTE's (#24) | .153 | .410* |

Correlations of Team Commitment Variables with Dependent Variables.

"Personal commitment to working on the team's action plan" (#22) and "team commitment to working on the team's action plan" (#23). N = 28. To be significant at the .05 level r must exceed .374; to be significant at the .01 level r must exceed .479, for 26 df.

* significant at .05 level
** significant at .01 level

Table XXIII

| | No administrators on team | Administrators on team | t | P |
|---|---|---|---|---|
| team development-ISR rating | 1.33 (.24) | 1.69 (1.03)* | -1.111 | .277 |
| activities accomplishment - ISR rating | 1.42 (.27) | 1.75 (.87)* | -1.115 | .275 |
| team development - DARTE Director's rating | 2.83 (1.06) | 2.38 (1.05) | 1.169 | .253 |
| activities accomplishment - DARTE Director's rating | 3.25 (1.30) | 2.87 (1.72) | .792 | .436 |
| impact on schools - participants' rating (#73) | 2.58 (.88) | 2.85 (.49) | -.861 | .397 |
| impact on community - participants' rating (#74) | 2.10 (.57) | 2.00 (.43) | .374 | .712 |
| team could develop alternatives to drug abuse (#19) | 2.50 (.77) | 2.19 (.28)* | 1.143 | .263 |
| team used process similar to DARTE's (#24) | 2.70 (1.08) | 2.91 (1.25) | -.512 | .613 |

t-tests on Dependent Variables for Differences between Teams which did not and did include Administrators.

df = 26 throughout. N = 12 and 16, respectively. Means for each group are shown along with the variance (in parentheses), the t for the difference between the means, and the associated probability levels. An asterisk (*) designates instances in which an F-statistic for the difference between the variances was significant at .05 or less, thus violating the assumption of equality of variances on which the t-test is based.

Table XXIV

| | serious | overall problem | availability | two years ago |
|---|---|---|---|---|
| seriousness of drug problem | - | .639** | .526** | .269 |
| overall drug problem relative to Wayne County | - | - | .555** | .026 |
| availability of drugs relative to Wayne County | - | - | - | .398* |
| overall drug problem relative to two years ago | - | - | - | - |

Intercorrelations of Variables Concerning the Drug Problem.

Seriousness of the drug problem (#38a); the overall drug problem relative to the rest of Wayne County (#39); the availability of drugs relative to the rest of Wayne County (#48); and the overall drug problem relative to two years ago (#51). N = 28. To be significant at the .05 level r must exceed .374; to be significant at the .01 level r must exceed .479, for 26 df.

* significant at .05 level
** significant at .01 level

Table XXV

| | seriousness | overall problem | availability | two years ago |
|---|---|---|---|---|
| team development-ISR rating | -.182 | -.166 | -.464* | .120 |
| activities accomplishment - ISR rating | -.034 | -.356 | -.174 | .214 |
| team development - DARTE Director's rating | -.040 | -.337 | -.238 | .091 |
| activities accomplishment - DARTE Director's rating | -.204 | -.417* | -.354 | .044 |
| impact on schools participants' rating (#73) | .155 | -.123 | -.259 | -.147 |
| impact on community - participants' rating (#74) | .044 | -.181 | -.315 | -.240 |
| team could develop alternatives to drug abuse (#19) | .023 | -.278 | -.179 | -.045 |
| team used process similar to DARTE's (#24) | .114 | -.061 | -.177 | -.099 |

Correlations of Drug Problem Variables with Dependent Variables.

"Seriousness of the drug problem" (#38a), "overall drug problem compared to Wayne County" (#39), "availability of drugs relative to Wayne County" (#48) and "overall drug problem relative to two years ago" (#51). N = 28. In order to be significant at the .05 level r must exceed .374; to be significant at the .01 level r must exceed .479, for 26 df.

* significant at .05 level
** significant at .01 level

Table XXVI

| | income |
|---|---|
| team development - ISR rating | .081 |
| activities accomplishment - ISR rating | .168 |
| team development - DARTE Director's rating | .445* |
| activities accomplishment - DARTE Director's rating | .452* |
| impact on schools - participants' rating (#73) | .199 |
| impact on community - participants' rating (#74) | .117 |
| team could develop alternatives to drug abuse (#19) | .370 |
| team used process similar to DARTE's (#24) | .001 |

Correlations of Income Relative to the Rest of Wayne County (#30) with Dependent Variables.

N = 28. In order to be significant at the .05 level, r must exceed .374; to be significant at the .01 level r must exceed .479, for 26 df.

* significant at .05 level
** significant at .01 level

Table XXVII

| | Administrative Nonsupport | No administrative Nonsupport | t | p |
|---|---|---|---|---|
| team development - ISR rating | 1.50 (80) | 1.58 (.63) | -.256 | .800 |
| activities accomplishment - ISR rating | 1.44 (.40) | 1.83 (.87) | -1.338 | .193 |
| team development - DARTE Director's rating | 2.50 (.93) | 2.67 (1.33) | -.416 | .681 |
| activities accomplishment - DARTE Director's rating | 2.94 (1.26) | 3.17 (1.97) | -.480 | .635 |
| impact on schools - participants' rating (#73) | 2.47 (.72) | 3.09 (.38) | -2.155 | .041 |
| impact on community - participants' rating (#74) | 1.85 (.47) | 2.30 (.39) | -1.775 | .088 |
| team could develop alternatives to drug abuse (#19) | 2.03 (.44) | 2.72 (.33) | -2.867 | .008 |
| team used process similar to DARTE's (#24) | 2.43 (1.20 | 3.34 (.67) | -2.417 | .023 |

T-tests on Dependent Variables for Differences between Teams for which Administrative Nonsupport was mentioned vs. not mentioned.

df = 26 throughout. N = 16 and 12, respectively. Means for each group are shown along with the variance (in parentheses), the t for the difference between means, and the associated probability levels. In no instance was an F-statistic for the difference between the variances significant at the .05 level or less, so the assumption of equality of variances on which the t-test is based was met throughout.

Table XXVIII

Least Squares Regression: Activities Accomplishment Rated by DARTE

| Source | df | Sum Sqrs. | Mean Sqr. | F-Stat. | Signif. |
|---|---|---|---|---|---|
| Regression | 3 | .41690 | .13897 | 4.2898 | .0189 |
| Error | 18 | .58310 | .03239 | | |
| Total | 21 | 1.0000 | | | |

Mult. R = .64568 R-Sqr. = .41690 SE. = .17998

| Variable | Partial | Beta Wt. | Std. Error | T-Stat. | Signif. |
|---|---|---|---|---|---|
| DARTE Helpfulness | .34514 | .28308 | .18144 | 1.5602 | .1361 |
| Student Involvement | .25467 | .22785 | .20393 | 1.1173 | .2785 |
| Income (Census Data) | .42612 | .40578 | .20305 | 1.9984 | .0610 |

Table XXIX

Independent Contributions of Independent Variables in Six Multiple Regression Analyses*

a) Activities accomplishment rated by DARTE

$R^2$ (all 3 variables) = .4169

| | | |
|---|---|---|
| community level income (Census data) | $R^2$ (without community level | .2875 |
| | $F(1,18) = 3.995$, $p<.10$ | |
| individual level helpfulness of DARTE | $R^2$ (without individual level) | = .3380 |
| | $F(1,18) = 2.436$, $p<.25$ | |
| team level student involvement | $R^2$ (without team level) | =<.3765 |
| | $F(1,18) = 1.247$, n.s. | |

b) Activities accomplishment rated by DARTE

$R^2$ (all 3 variables) = .3624

| | | |
|---|---|---|
| community level % with < high school education (Census data) | $R^2$ (without community level) | = .1937 |
| | $F(1,20) = 5.292$, $p<.05$ | |
| individual level helpfulness of DARTE | $R^2$ (without individual level) | = .3623 |
| | $F(1,20) = .003$, n.s. | |
| team level effectiveness of leader after training | $R^2$ (without team level) | = .2791 |
| | $F(1,20) = 2.613$, $p<.25$ | |

*(see end of table)

(continued)

Table XXIX, continued

c) Activities accomplishment rated by I.S.R.

| | | |
|---|---|---|
| | $R^2$ (all 3 variables) | = .2880 |
| community level income (Census data) | $R^2$ (without community level) | = .1326 |
| | $F(1,18) = 3.929$, $p<.10$ | |
| individual level helpfulness of DARTE | $R^2$ (without individual level) | = .2879 |
| | $F(1,18) = .003$, n.s. | |
| team level effectiveness of leader after training | $R^2$ (without team level) | = .2141 |
| | $F(1,18) = 1.868$, $p<.25$ | |

d) Activities accomplishment rated by I.S.R.

| | | |
|---|---|---|
| | $R^2$ (all 3 variables) | = .5392 |
| community level % living in same house (Census data) | $R^2$ (without community level) | = .4541 |
| | $F(1.19) = 3.303$, $p<.10$ | |
| individual level accuracy of DARTE's information on social aspects of drug use | $R^2$ (without individual level) | = .5389 |
| | $F(1,19) = .012$, n.s. | |
| team level student involvement | $R^2$ (without team level) | = .1816 |
| | $F = 14.7444$, $p<.01$ | |

(continued)

Table XXIX, continued

e) Impact of DARTE on Schools (#73)

| | |
|---|---|
| | $R^2$ (all 3 variables) = .3686 |
| community level "age" of district (1=old, losing students... 3=growing); rated by DARTE | $R^2$ (without community level) = .3529<br>F(1,24) = .597, n.s. |
| individual level helpfulness of DARTE | $R^2$ (without individual level) = .1675<br>F(1,24) = 7.644, p<.025 |
| team level student involvement | $R^2$ (without team level) = .3096<br>F(1,24) = 2.243, p<.25 |

f) Impact of DARTE on Schools (#73)

| | |
|---|---|
| | $R^2$ (all 3 variables) = .2608 |
| community level % living in same house (Census data) | $R^2$ (without community level) = .2576<br>F(1,19) = .082, n.s. |
| individual level helpfulness of DARTE | $R^2$ (without individual level) = .1409<br>F(1,19) = 3.082, p<.10 |
| team level student involvement | $R^2$ (without team level) = .1552<br>F(1,19) = 2.714, p<.25 |

(continued)

Table XXIX, continued

*formula:

$$F=\frac{[R^2(\text{all variables})-R^2(\text{one left out})]\times[(N-p-1)]}{1-R^2(\text{all variables})}$$

for 1, (N-p-1) df where N = number of cases
p = number of independent variables

(Overall and Klett, 1972, 422-424).

Table XXX

| | # of students interviewed per district |
|---|---|
| team development - ISR rating | .175 |
| activities accomplishment - ISR rating | .187 |
| team development - DARTE Director's rating | .366 |
| activities acomplishment - DARTE Director's rating | .324 |
| impact on schools - participants' rating (#73) | .250 |
| impact on community - participants' rating (#74) | .195 |
| team could develop alternatives to drug abuse (#19) | .551** |
| team used process similar to DARTE's (#24) | .239 |

Correlations of Number of Students Interviewed in each School District with Dependent Variables.

Mean = 1.5; df = 26. In order to be significant at the .05 level r must exceed .374; to be significant at the .01 level, r must exceed .479.

* significant at .05 level
** significant at .01 level

Table XXXI

| | # of students in score r | p |
|---|---|---|
| accuracy of drug information (#9) | .073 | n.s. |
| accuracy of information about legal aspects (#10) | .107 | n.s. |
| accuracy of information about social aspects (#11) | .076 | n.s. |

Mean = 1.5. df = 26. To be significant at the .05 level r must exceed .374; to be significant at the .01 level r must exceed .479.

---

| | # students making up score | | | | |
|---|---|---|---|---|---|
| | mean | s.d. | N | r | p |
| pretest error score on Drug Knowledge Inventory ($\bar{x}$ = 7.42, s = 1.73) | 1.29 | .83 | 14 | .439 | .116 |
| Pretest discrepancy score on Opinion Inventory ($\bar{x}$ = 27.37, s = 5.00) | 1.06 | .83 | 17 | .165 | .527 |
| Change Score on Drug Knowledge Inventory ($\bar{x}$ = -.88, s = 1.08) | 1.29 | .83 | 14 | -.337 | .238 |
| Change score on discrepancy in Opinion Inventory ($\bar{x}$ = 6.31, s = 4.32) | .87 | .92 | 15 | -.292 | .291 |

Correlations for the Number of Students included in the Teamscore with Credibility Variables and Questionnaire Variables.

Means and standard deviations for the four questionnaire variables are shown in parentheses, while means, standard deviations (for the number of students included), N's, r's, and probability levels are shown in the rest of the table.

Table XXXII

Summary of Analyses of Variance by Age and Sex for Three Interview Variables Showing Sex Differences

| item number | item content (abbreviated) | | SM | SF | AM | AF | differences observed | significance of t-tests |
|---|---|---|---|---|---|---|---|---|
| 19 | team's ability to develop alternatives to drug abuse | $\bar{x}$ | 2.71 | 1.90 | 2.66 | 2.29 | males > females | .011 |
| | | s.d. | (1.45) | (1.09) | (1.10) | (1.30) | | |
| | | N | (21) | (21) | (42) | (58) | | |
| | | overall F(3,138)=2.364, p = .074 | | | | | | |
| 24 | use of DARTE process in training others | $\bar{x}$ | 3.10 | 2.71 | 3.21 | 2.66 | males > females | .086 |
| | | s.d. | (1.62) | (1.55) | (1.39) | (1.42) | | |
| | | N | (20) | (21) | (42) | (59) | | |
| | | overall F(3,138)=1.412, p is n.s. | | | | | | |
| 31 | effectiveness of leader since training | $\bar{x}$ | 3.89 | 2.80 | 3.25 | 3.03 | males > females | .011 |
| | | s.d. | (1.23) | (1.61) | (1.13) | (1.35) | | |
| | | N | (18) | (20) | (40) | (56) | | |
| | | overall F(3,130)=2.57, p=.057 | | | | | | |

Each item shows the question number, abbreviated question content, means for the 4 groups (SM=student males; SF= student females; AM=adult males; AF=adult females) along with the standard deviation and N for each group. Also shown are the overall F for the one-way analysis of variance, the observed differences in the specified contrasts, and the significance of the t-test for the contrast. The assumption of equal variances was met in all three cases.

# APPENDIX A: LETTERS REQUESTING SUBJECT PARTICIPATION

ISR

CENTER FOR RESEARCH ON UTILIZATION OF SCIENTIFIC KNOWLEDGE / INSTITUTE FOR SOCIAL RESEARCH / THE UNIVERSITY OF MICHIGAN
ANN ARBOR, MICHIGAN 48106

Dear

We are writing to you because you have been a member of the DARTE (Drug Abuse Reduction through Education) team in your school district. The DARTE staff is interested in evaluating their program and trying to improve it; we are doing some research to help them accomplish that goal. We are interested in knowing your frank opinions about your experience as a DARTE team member and about the work your team has done. We can assure you that your replies will be held in strict confidence, and that neither your name nor the name of your particular school district will appear in any written report of our research. We would like to use the factual information concerning activities carried out when we interview other team members to check their perceptions of the work, but we won't divulge any of your feelings or opinions to others.

We hope to interview up to six people from each team. You are one of a smaller number of people from whom we are requesting more detailed information than the others, especially with respect to actual activities in which your DARTE team has been involved. We will be asking you to fill out a questionnaire which will help us know what drug education activities have been carried out in your district since the formation of your DARTE team. Then we hope to interview you by telephone, to elaborate on your replies to the questionnaire, and to ask you a number of other questions about your DARTE experience. Within the next week, one of our staff will try to reach you by telephone; we will then ask you if you agree to participate in this study. If you agree, the person who calls you will ask you how many drug education activities your team has carried out and arrange to send you the appropriate number of questionnaires to fill out concerning each activity. Our staff member will call again in a few days to arrange a mutually convenient time to interview you by telephone, and to go over the questionnaire. On

December 5th, 2:30-4:30, we will be having a conference in which the results of our research will be described in summary form and all present will be able to work on deriving implications and recommendations from those findings; you will be notified later of the place. We hope you will agree to participate in this study, and look forward to working with you.

You will find enclosed a letter from Leonard Demak, the Project Administrator of DARTE, which further explains the purpose of this research.

If you have any questions concerning this research, feel free to call Mr. BenDor or Ms. Horst at 764-6108, (we will return your call if we are not in), or write us at the address shown.

Yours Truly,

Dr. Ronald Lippitt
Project Director

Ms. Leslie Horst
Asst. Project Director

Mr. Michael BenDor
Asst. Project Director

DARTE DRUG ABUSE REDUCTION THROUGH EDUCATION

1610 KALES BUILDING
DETROIT, MICHIGAN 48226
(313) 962-1332

LEONARD S. DEMAK, Ed. D.
Project Administrator

DOLORES PASKAL, Ed. D.
Staff Development Consultant

KENNETH KAMINSKY, M.S.W.
Staff Development Consultant

16 October 1972

Dear DARTE Team Member:

You remember, I hope, the commitment that DARTE had toward evaluation of our drug abuse education efforts. That commitment continues with a broader effort now beginning.

Ms. Leslie Horst and Mr. Michael BenDor, working under the direction of Dr. Ronald O. Lippitt of the Center for Research on the Utilization of Scientific Knowledge of the Institute for Social Research at the University of Michigan are developing the evaluation design and are responsible for field interviews.

You can help them obtain the necessary data. They and we need your help in providing the kind of information that only you have.

You will be contacted shortly by a member of the evaluation team. I hope and expect that the time you spend will help us all know more and do a better job in the field of drug abuse education. The evaluation is important also to the Office of Criminal Justice Programs and the Michigan Department of Education.

Neither you nor your school district will be identified. Your confidences will be protected.

A conference designed to disseminate the findings of the evaluation study will be held in December. You will be invited to attend.

Please feel free to contact me if you have any questions or wish more information.

Thanks!

Sincerely,

Len Demak

Leonard S. Demak, Ed. D.
Director

LSD/lp

WAYNE COUNTY INTERMEDIATE SCHOOL DISTRICT

WILLIAM SIMMONS
Superintendent

WILLIAM C. MILLER
Deputy Superintendent

CLARE E. EGERSOLE
Assistant Superintendent
In Charge of Business Affairs

# APPENDIX B

DARTE-WCISD (rev. 7/71)
1610 Kales Building
Detroit, Michigan 48226

Directions: *Please do not write on this Inventory. MARK YOUR ANSWERS ON THE ANSWER SHEET.*

## DRUG KNOWLEDGE INVENTORY

1. A drug which produces both physical and psychological dependency is one which causes:

   A. emotional and physical craving and a need to increase dosage.
   B. emotional and physical craving, but no need to increase dosage.
   C. emotional craving, but no physical craving or need to increase dosage.
   D. regular use, but no craving or need to increase dosage.

2. A drug which produces psychological dependency is one which causes:

   A. emotional and physical craving and a need to increase dosage.
   B. emotional and physical craving, but no need to increase dosage.
   C. emotional craving, but no physical craving or need to increase dosage.
   D. regular use, but no craving or need to increase dosage.

3. Of those listed below which is the least frequent cause of drug addiction among teenagers?

   A. Curiosity
   B. Peddlers or "pushers"
   C. Pressure from peers
   D. Thrill-seeking

4. Which terms refer to barbiturates?

   A. Amytal, Nembutal, Seconal
   B. Benzedrine, Dexedrine, Methedrine
   C. Librium, Miltown, Thorazine
   D. Codeine, Heroin, Morphine

5. Which one is the most likely description of a person who has taken more than a prescribed amount of a barbiturate?

   A. Giggling, daydreaming
   B. Even-tempered, withdrawn
   C. Drowsy, slurred speech
   D. Restless, perspiring

6. Opium is derived from:

   A. a cactus
   B. a hemp plant
   C. a mushroom
   D. a flower

7. Which of the following terms refers to a drug made from opium?

   A. Cocaine
   B. Methedrine
   C. Morphine
   D. Hashish

8. Which one is the most likely description of a person who has taken more than a prescribed amount of an opiate?

   A. Excited and hyperactive
   B. Hostile and aggressive
   C. Nervous and fearful
   D. Quiet and inactive

9. What happens when an opiate addict discontinues the use of opiates?

   A. Withdrawal causes no more physical distress than discontinuing the use of tobacco.
   B. Withdrawal causes much physical distress but little danger of death.
   C. Withdrawal causes much physical distress and considerable danger of death.
   D. Withdrawal causes much emotional distress but little physical distress.

(Please continue on the back of this page.)

10. Which is the best explanation for the close relationship between opiate use and crime?

    A. An addiction to opiates is very expensive.
    B. Opiates inspire criminal acts.
    C. An opiate user is not fully aware of what he is doing.
    D. Opiates decrease fears and inhibitions.

11. Which terms refer to tranquilizers?

    A. Amytal, Nembutal, Seconal
    B. Benzedrine, Dexedrine, Methedrine
    C. Codeine, Heroin, Morphine
    D. Librium, Miltown, Thorazine

12. Which of the following terms refer to amphetamines?

    A. Amytal, Nembutal, Seconal
    B. Benzedrine, Dexedrine, Methedrine
    C. Librium, Miltown, Thorazine
    D. Codeine, Heroin, Morphine

13. Which is the most likely description of a person who has taken more than a prescribed dose of an amphetamine?

    A. Giggling, daydreaming, enlarged pupils
    B. Inactive, quiet, small pupils
    C. Poor balance, slurred speech, short temper
    D. Restless, perspiring, enlarged pupils

14. Which terms refer to hallucinogens (psychedelic or mind-expanding drugs)?

    A. Cocaine, novocaine
    B. Dilaudid, paregoric
    C. Luminal, Tuinal
    D. Mescaline, Psylocybin

15. Authoritative literature about the possibility of physical damage from marihuana indicates that:

    A. its use does damage to nerves and lungs.
    B. its use does no physical damage.
    C. it has not been proved to be physically harmful.
    D. it is physically harmful only if often used.

16. Which are the most probable immediate effects of marihuana use?

    A. Daydreaming, altered sense of time
    B. Restlessness, quick temper
    C. Inactivity, small pupils
    D. Slurred speech, poor balance

17. Which statement best describes the relationship of marihuana use to mental illness?

    A. Its use can cause mental illness.
    B. Its use is not related to mental illness.
    C. Its use may increase one's chances of becoming mentally ill.
    D. Its use may disclose or aggravate mental illness.

18. Which one of the following is the best description of the kind of person who is likely to become a drug abuser?

    A. No one kind of person
    B. A person who is unable to achieve a satisfactory social adjustment
    C. A person who is unable to foresee the end results of his behavior
    D. A person of weak character and of little self-control

19. Black market or "street" drugs are unsafe because:

    A. they often are of unknown strength and of questionable purity.
    B. they usually are stronger than prescribed drugs.
    C. they are more likely to cause addiction than prescribed drugs.
    D. they often are spoiled drugs that have been discarded.

20. Misuse of which one of the following kinds of drugs most often causes death?

    A. Amphetamines
    B. Barbiturates
    C. Hallucinogens
    D. Opiates

Thank you.

# APPENDIX C

DRUG EDUCATION

Reprinted by DARTE-WCISD (rev.7A?T)
1610 Kales Building
Detroit, Michigan,48226

## OPINION INVENTORY

DIRECTONS: Give your opinion about each of the items below by marking on the separate answer sheet the number, 1-5, which most accurately expresses your opinion at this time.

1 - I strongly agree with this statement.
2 - I tend to agree with this statement.
3 - I really could not say.
4 - I tend to disagree with this statement.
5 - I strongly disagree with this statement.

OPINION STATEMENTS:

1. Young people who abuse drugs are inadequate or immature individuals who need a crutch to cope with reality.
2. The only successful education and prevention programs are those which involve ex-addicts or ex-users.
3. It has been shown that LSD stimulates or enhances creativity.
4. The nature and extent of drug abuse among high school and elementary school children has been exaggerated.
5. No drug prevention program in school or community will be successful unless young people are involved at every state of planning and execution.
6. A drug is any substance that affects the structure and function of the living organism.
7. For total amount of damage done to our society, alcohol is more dangerous than any other drug.
8. Today drug abuse is a problem of equal magnitude in upper, middle, and lower socioeconomic class children.
9. The principal reason for the ineffectiveness of most drug education efforts is that they make no distinctions among various patterns of use -- experimental, occasional, regular, compulsive.
10. An important motive for drug use is the obvious approval of drug use by legitimate adult sources.
11. Every pharmacologically active drug is dangerous at some dose in some individuals under some circumstances.
12. Education about drugs is meaningless unless society evolves strategies to deal with the physical, psychological, and social conditions that predispose to drug dependence.
13. It is now known that drug users hav lower than average I. Q.'s.
14. An important reason for drug use is easy access to drugs.

(over)

15. Investigations into chromosomal changes, birth defects, and brain cell alterations following LSD use are not conclusive.

16. Young people can be effectively involved in persuading other young people not to use drugs, but only if they have been carefully selected and trained in the dangers of drug abuse.

17. When your child is found to be using drugs, an excellent source of help is your clergyman.

18. School programs in the area of drug education cannot be successful without continuous community involvement.

19. The greatest danger of marihuana use is arrest for a felony.

20. There can be no single successful method or prevention of treatment of drug abuse for all individuals.

PLEASE RETURN THIS OPINION INVENTORY WITH YOUR ANSWER SHEET.

Thank you

# APPENDIX D

## ACTIVITY QUESTIONNAIRE

NAME OF INFORMANT:_____

NAME OF ACTIVITY OR PROGRAM AND DATE BEGUN:_____

A. Please estimate the major emphases of this program or activity by assigning the percentages of time spent with the following areas of content:

| | | |
|---|---|---|
| % | 1. | Drug facts |
| % | 2. | Values Clarification |
| % | 3. | Alternatives to drugs |
| % | 4. | Communication experiences |
| % | 5. | Action planning |
| % | 6. | Discussing and developing school-community relationships |
| % | 7. | Psychological-Social (why people take drugs) |
| % | 8. | Other (specify) _____ |
| % | 9. | Other (specify) _____ |
| 100% | | PLEASE SEE THAT PERCENTAGES TOTAL 100% |

| | | | |
|---|---|---|---|
| Was alcohol included? | [ ] YES | [ ] NO | [ ] NOT APPLICABLE |
| Was cigarette smoking included? | [ ] YES | [ ] NO | [ ] NOT APPLICABLE |
| Was caffeine included? | [ ] YES | [ ] NO | [ ] NOT APPLICABLE |

B. Who was involved in this program? Please indicate as nearly as possible, in the table below, the approximate numbers of people who were involved in each role group who participated in the aspects listed below. If none, please write in 0:

1. Planning the program
2. Served as program resources (i.e., actually carried out the program--gave lectures, led groups, etc.)
3. Were the target population for the program (i.e., the people the program was aimed at, the participants)

| | (1) Planning | (2) Resources | (3) Target Population |
|---|---|---|---|
| A. Students | | | |
| B. Teachers | | | |
| C. Administrators | | | |
| D. Counselors | | | |
| E. Parents | | | |
| F. Nurses | | | |
| G. Social Workers | | | |
| H. Community Resources (Who) | | | |
| I. Others (Specify) | | | |

C. Which grade levels were involved in the program? _____

_____ (Please indicate each grade level, don't write "all")

Approximate total number of hours_____ Please describe briefly the program schedule (e.g., "one a week for three hours") _____

_____

_____

Was the program incorporated into the regular curriculum? [ ] YES [ ] NO

Was the program a one-shot program (on an experimental basis)? [ ] YES [ ] NO

Please circle all of the descriptions of the units of your school district which describe who was included in this program:

One School Several Schools All Schools

Elementary Level Middle School Junior High Senior High

One Class Several Classes All Classes

How were they selected? _____

Were (a) selected teachers involved [ ] ?

(b) all teachers involved [ ] ?

If (a), how were they selected? _____

_____

Was participation for the students (a) voluntary [ ] (b) mandatory [ ] ?

Was participation for the teachers (a) voluntary [ ] (b) mandatory [ ] ?

D. Please estimate the major methods your program used by assigning percentages to the following categories.

% A. Group discussions using small groups

% B. Large group discussions

% C. LECTURES

% D. Designed exercises

% E. Other (specify) _____

100% PLEASE SEE THAT PERCENTAGES TOTAL 100%

E. Do you feel that this program was:

[ ] very successful [ ] somewhat successful [ ] so-so [ ] something of a failure [ ] a failure

F. To what degree was this program similar to the one in which you were trained by the DARTE staff?

[ ] not at all similar

[ ] slightly similar

[ ] moderately similar

[ ] quite similar

[ ] very similar

G. Various factors contribute to the success of a program. Below, we have listed a number of factors, and we would like you to indicate the percentage which you felt each factor contributed to whatever success your activity experienced. If nothing contributed to the success of your activity, indicate that by writing "nothing" next to the column.

___% Team leadership

___% Support from the school system

___% Ability to work as a team

___% Resources from the community (e.g., doctors, police, etc.)

___% Materials (e.g., DARTE Resource Guide)

___% Other (specify) _____

___% Other (specify) _____

100% PLEASE SEE THAT PERCENTAGES TOTAL 100%

H. These same factors can contribute to the failure of a program. We have listed these factors again, and we would now like you to indicate the percentage which you felt each factor contributed to whatever failure your activity experienced. If nothing contributed to the failure of your activity, indicate that by writing "nothing" next to the column.

___% Lack of team leadership

___% Lack of support from school system

___% Inability to work as a team

___% Lack of resources from the community (e.g., doctors, police, etc.)

___% Lack of materials or inappropriateness of materials

___% Other (specify) _____

___% Other (specify) _____

100% PLEASE SEE THAT PERCENTAGES TOTAL 100%

# APPENDIX E: INTERVIEW

## INFORMANT INTERVIEW SCHEDULE

BEFORE BEGINNING THE INTERVIEW, IT IS IMPORTANT TO ESTABLISH A CLEAR UNDERSTANDING WITH THE INFORMANT ABOUT WHAT IT IS THAT WE ARE TRYING TO LEARN IN OUR INTERVIEW. SINCE WE WILL BE TALKING WITH THE TEAM LEADER AND ANOTHER ACTIVE TEAM MEMBER, WE HAVE SOME COMMON INTEREST--THE TEAM IS INTERESTED IN LEARNING HOW TO FUNCTION MORE EFFECTIVELY AND LEARNING ABOUT THE EFFECTS THAT IT HAS HAD ( HOW ARE WE DOING, COMPARED WITH OTHER TEAMS). THIS IS AN IMPORTANT PART OF DEVELOPING RAPPORT WITH THE INFORMANTS.

Before we begin this interview, I'd like to make sure that you understand what we are trying to learn by interviewing you and why we are doing this study. What is your understanding about this now?

LISTEN CAREFULLY! THEN FILL IN ACCORDING TO THE POINTS OUTLINED BELOW:

1. WHO WE ARE - IF THEY'RE NOT CLEAR: We are part of the Center for Research on the Utilization of Scientific Knowledge which is part of the Institute for Social Research which is part of the University of Michigan. The study is being done for DARTE and the Wayne County Intermediate School District. We are working for the University of Michigan, although the study is funded by DARTE.

2. WHAT WE ARE DOING: We are studying the effects of DARTE training, evaluating the DARTE program and disseminating the results of our findings to everyone who participates in the study as well as relevant educators, the DARTE staff, and anyone else who would like the information.

3. WHAT ARE WE STUDYING: We are studying several aspects of the DARTE program. First, we have information collected about the effects of the DARTE

training on the individual who participated in it, specifically about the effects of the training on their knowledge and opinions about drugs. One purpose of this study is to get your individual opinions about the training.

Secondly, we are studying the effects of DARTE training on the development of the DARTE teams. In this interview, I would like to get information about this from you.

Thirdly, we are studying the activities carried out by the DARTE teams. And fourthly, we are getting some general assessment of the impact of the DARTE program on the various communities.

4. WHAT'S IN IT FOR ME TO SPEND TIME ON THIS? : You may be able to get a new perspective about your team and your team's activities just from answering our questions, and you certainly will get information about other teams' experiences and their activities in our feedback session in December. You will also get to see what we have found out about your team. At the feedback session in December, there will be an opportunity to get some consultation with others about problems your team is facing.

SAY: All of the information you give me in this interview will be confidential. Your name will not be included in any reports of these interviews, and even the name of your school district will not be used. However, we would like to use the information you have given us on the questionnaires about what activities your team has carried out in our other interviews with members of your team. This is so that we will be able to gain their perceptions about these activities. All of your opinions will be kept strictly confidential. Is this agreeable to you?

We plan to have a meeting on December 5th, from 2:30 to 4:30 P.M. In this meeting, we will report back to you what we have learned from our

study. Before that meeting we will send you the confidential code we are using for your school district. This will enable you to identify what we have learned about your team.

Do you have any questions?

WORK OUT A CLEAR AGREEMENT, IF THE INFORMANT DOESN'T UNDERSTAND.

Use questions off of response sheet to #7 [includes whether or not respondent was a team leader, respondent's occupation, grade level(if student or teacher), years in district, sex age , and time of joining DARTE team].

7. We are interested in how people were selected for your DARTE team, if you know. Please describe breifly how _____ were selected.
FOR THE INITIAL TRAINING

CODING OPTIONS: INDICATE BY LETTER IF ONE OF THE FOLLOWING APPLIES:

A. SELECTED BY ADMINISTRATOR (NOTE ROLE TITLE)
B. SELECTED BY COUNSELORS (NOTE ROLE TITLE)
C. SELECTED IN AN ELECTION (NOTE WHO VOTED)
D. SELECTED BY AN INDIVIDUAL (NOTE WHO AND WHAT ROLE TITLE)
E. SELF-SELECTED (NOTE HOW ADVERTISED,WHO COULD SELECT ONESELF)

8. How was the team leader designated or chosen?
IF TALKING WITH THE TEAM LEADER: HOW WERE YOU DESIGNATED OR CHOSEN AS TEAM LEADER?

IF THE TEAM LEADER WAS APPOINTED, FIND OUT WHO APPOINTED HIM OR HER, AND WHAT PROCESS WAS (E.G., APPLICATION, VOLUNTEERS, ETC.). IF THE TEAM LEADER WAS ELECTED, FIND OUT WHO VOTED IN THE ELECTION AND THE NOMINATION PROCEDURES E.G. COULD STUDENTS BE NOMINATED?)

Now I would like you to make some ratings of the Darte training sessions you originally participated in. We will use a five point scale, where one is "poor" and five is"exellent". How would you rate?:

INDICATE NO ANSWER WITH "0"

0 1 2 3 4 5 · 9. The accuracy of the <u>drug information</u> given during the training.

10. On the same five-point scale, how would you rate the accuracy of the information given to you about the <u>legal</u> aspects of drug abuse?

11. How would you rate the accuracy of the information given you about the <u>legal</u> aspects of druf abuse?

12. How would you rate the helpfulness of the DARTE training staff?

13. How helpful was the values clarification training in helping you examine your own values and learn decision-making skills?

14. The communication experiences were designed to build more open relationships. Using a five-point scale, where one is "didn't help at all" and five is "very helpful," to what degree did the communications experiences help you personally in being more open with other people?

0 1 2 3 4 5 15. To what degree did they help team members be more open in relations with each other?

16. An emphasis in DARTE training was to help you develop your ability to work together successfully with persons of different ages and backgrounds. How helpful has this training been to you personally?

17. How helpful do you feel this training was for your team?

18. Another aspect of the DARTE training was the development of alternatives to drug abuse, for instance, Tai Chi, meditation and Yoga. To what degree do you feel these have helped you in your own personal development?

19. Since DARTE training, to what extent do you feel your team has been able to develop activities in your school community as alternatives to drug-abusing behavior? FIVE POINT SCALE WHERE ONE IS "NOT AT ALL" AND FIVE IS "VERY MUCH".

20. What other aspects of your initial DARTE training did you feel were important? LIST

0 1 2 3 4 5 21. How would you rate them, using the same five-point scale?

For the next few questions, I'd like to use a scale, which again has five points, where one is "not at all committed, and five is "very committed."

0 1 2 3 4 5 22. During the DARTE training, your team developed an Action Plan for activities to be carried out in your school district. How committed did you feel personally to working on this program?

23. In your perception, how committed have members of your team been in working on this program?

24. To what degree has your team used the DARTE process in its training of other groups of educators and students? Please use a scale where one is "not used at all" and five is "used a great deal."

25. To what degree have you felt competent in using values clarification training? Please use a scale where one is "not at all competent" and five is "very competent".

26. Please give an example, if you have personally used values clarification

training, of how and where you used it.

1 2 3 4 5 27. To what extent did you feel competent in using communication activities designed to build more open relations among people? ONE IS "NOT AT ALL COMPETENT" AND FIVE IS "VERY COMPETENT".

28. Please give an example, if you personally have used communication activities, of how are where you used them.

1 2 3 4 5 29. To what extent did your team feel competent in locating and using information materials and training resources?

30. At the end of DARTE training, how do you think your team felt about its leadership? YOUR LEADERSHIP, IF TEAM LEADER Please use the scale where one is "very dissatisfied", three is "neutral", and five is "very satisfied."

31. How effective do you feel the (your) leadership of the DARTE tea- has been since your initial DARTE training?. Please use a scale from one to five, where one means "very ineffective" and five means "very effective."

32. How soon after your DARTE training did your team have its first meeting?

_____ FIND OUT APPROXIMATELY IF INFORMANT DOESN'T REMEMBER--ANSWER IN WEEKS AND MONTHS.

33. How often did the DARTE team meet?_____ WEEKLY, MONTHLY, DID THE TEAM BREAK INTO SUBGROUPS?

IF THE TEAM BROKE INTO SUBGROUPS PROBE: WHO WAS THE LEADER?
HOW OFTEN DID THEY MEET?
HOW DID THEY REMAIN A PART OF THE TEAM? (I.E., HOW WERE COMMUNICATIONS MANAGED?)
WHAT SUBAREA DID THEY CHOOSE?

34. Now I would like you to describe the extent that students were involved in the team's activities. We would like to know how students were involved in planning team activities, and if so, to what extent. PROBE ISSUES AROUND POWER; WAS THERE TRUE COLLABORATION?

35. Are there any important issues that we haven't identified which you feel affected the development of your team as a working unit?

YES NO

IF YES: Could you describe that to me?

36. Were there any activities that your team planned but did not carry

out?

WHAT?
WHY NOT CARRIED OUT?

37. In some cases, individual members of the DARTE teams have been involved in drug abuse education programs which were not a part of the DARTE team activities. For example, in scout groups, churches or synagogues. Have you been involved in any additional activities related to drug abuse education?

IF YES, PROBE FOR WHAT ACTIVITIES, ETC.

38. Before we turn to some more general questions about your community, I want to find out more about your own personal experience with DARTE training and your DARTE team. Have you found this experience has affected you personally?

YES NO

IF YES Perhaps you could give me an example of how. . . .

Are there any other ways? YES NO

38a. And now, the questions about your community--how serious do you feel the drug abuse problem is in your community? Please indicate your answer using a five-point scale, where one is "not at all serious" and five is "very serious."

0 1 2 3 4 5

For the next set of questions, I'd like to use a rating system which makes a comparison between your community and other Wayne County communities. The scale I'd like you to use has five points, where one is "much less than other Wayne County communities" and where five is "much more than other Wayne County communities." Please answer these questions to the best of your knowledge, but if you can't make a rating, please indicate this.

0 1 2 3 4 5 39. How would you compare the overall drug problem in your community with other Wayne County communities?

40. Compare the extent of <u>narcotics</u> use in your community with other Wayne County communities.

41. Compare the extent of <u>alcohol</u> use in your community with other Wayne County communities.
("You mean relative to other Wayne County communities?")

56. Compare the extent of hallucinogen use in your community with their use one year ago

57. Two years ago?

58. Compare the extent of amphetamine use in your community with their use one year ago.

59. Two years ago?

60. Compare the extent of barbiturate use in your community with their use one year ago.

61. Two years ago.

62. Marijuana use?

63. Two years ago?

64. How publicly does your community deal with drug problems compared with one year ago?

65. Two years ago?

66. How does the availability of drugs in your community compare with their availability one year ago?

67. Two years ago?

68. What major changes have you perceived in your community's economic life during the past five years?

69. In what year do you feel your community became aware of its drug abuse problem? _____or does your community not consider drug abuse a problem_____(don't know)_____

70. In a word or two, would you tell me what you feel the overall reasons for drug abuse are, for youth?

71. for adults?

72. In a word or two, would you tell me what you feel the attitudes of adults are toward drug abuse in your community?

0 1 2 3 4 5 73. To what degree do you feel your DARTE program had an impact on your schools? THIS INCLUDES ALL PROGRAMS DEVELOPED BY THE TEAM. Please use a five-point scale where one is "no impact", three is "some impact", and five is "very strong impact."

PROBE FOR INFORMATION ABOUT AN EXAMPLE OF IMPACT.

IN PARTICULAR WE WANT DESCRIPTIONS OF FACTS THEY OBSERVE, OR EXPERIENCES THAT THEY HAVE HAD WHICH THEY ARE INTERPRETING AS HAVING IMPACT.

74. To what degree do you feel your DARTE program had an impact on your community? THIS INCLUDES ALL PROGRAMS DEVELOPED BY THE TEAM.

75. To what degree do you feel that drug abuse is caused by factors outside the potential control of your DARTE team? Please use a five point scale where one is "not at all" and five is "entirely."

76. What are the major factors outside the control of your DARTE team, in your opinion?

77. What future plans does your team have for programs? In other words, I'd like to know what programs you won't repeat, and also any new efforts you are planning.

78. Have any evaluations or reports been made of any of your team's activities or programs?
IF YES, FIND OUT WHO MADE THEM AND HOW WE CAN GET A COPY--WE WANT TO READ ANY EVALUATIONS WHICH HAVE BEEN DONE!

79. Is it anybody's job to account for the time and money which the DARTE team has used in the development of its activities? Are there reports which someone has to write, etc.?

80. If your district had not had DARTE training, would your district have done things differently?

81. Is there anything else you feel we should know to help us evaluate the DARTE program?

If there's anything else that you remember or think of, in the next day or so, please write us or phone us. You have our address and phone number. We will return your call if we're not there.

APPENDIX F

CASE STUDIES OF DARTE SCHOOL DISTRICT TEAMS

(from Horst and BenDor, 1973)

SCHOOL DISTRICT #1

This "elementary" team is not completely separate from the secondary team. Some of the interviewees (as well as the leader of the secondary team) seemed to be under the impression that there was just one team, and included information about the secondary team's activities in their interviews.

The original team trained by DARTE included an equal number of students and teachers as well as a social worker and police liaison officer. The leader, a teacher, had had previous experience in DARTE workshops. The students were selected by an administrator. The teachers and social worker volunteered, although some teachers were asked to volunteer. The leader did not know how the police liaison officer got to be included. An administrator went to one day of training and then left; he has since moved from the district. The interviewees generally rated the training sessions highly.

The team was trained in the winter and met a few times in the spring to plan an in-service training workshop for all fifth and sixth grade teachers in the district and one student, a volunteer, from each of the thirty-one classes. Teachers were then expected to use what they had learned in their classrooms as they felt they wanted it. After the

workshop a survey of the participants was done, but a copy of it was not available to the evaluation team (ISR) at the time of this report. The team also planned an after-schools program and a drug curriculum for all elementary schools, but these activities were apparently not supported by the administration. This lack of support was indicated by such decisions as not allowing after-school activities (the janitors would have to stay late). Those activities which were carried out were considered somewhat successful.

The team has not met since the spring workshop, although the members are still using values clarification and communication techniques as individuals. All the students on the team have gone on to junior high this year.

Students in this team were apparently involved but not very active in decision-making or organizing activities. Half of the interviewees were involved in outside activities related to drug education.

SCHOOL DISTRICT #2

This team consisted of three parents, four students, three teachers, a counselor and two administrators. One informant stated that the students were chosen on a voluntary basis from the student council, while another said they were chosen at random. The teachers were selected by the assistant principal (also team leader) because of interest or job description. The administrators were on the team because they were interested. The counselor

volunteered and the parents volunteered after hearing about the program through the P.T.O. and a school publication. The team leader was chosen by the superintendent because of his past interest in drug education.

One of the two students approached for interview refused to participate. The opinions on student involvement ranged from "involved 100%" to "our students haven't done very much" to "the students aren't listened to at all... are really put down...aren't allowed to talk."

Most of the opinions on the DARTE training and staff were highly favorable. The idea of learning alternatives to drug abuse was especially valued. One informant felt the training could be compressed into three days with more factual information, especially about how other systems were handling programs. The same person felt that the groups were gotten together too soon, before they were ready.

This district has had a commercial drug education program in the seventh grade for two years and has begun teacher training to supplement DARTE training in grades eight and nine. Drug education did not succeed as an outside activity in the high school and the only activities done there so far have been alternatives -- synchronized swim and basketball for girls, transcendental meditation, newspaper, etc.

The only activity reported on in the questionnaires was an adult program which was for volunteers (mostly parents) who wished to be a part of a drug education

curriculum and DARTE-trained parents who wanted more drug fact information. This ran three hours, one night a week for six weeks and was considered very successful. One interviewee said that the gym teachers were teaching a values clarification unit, but this was not described in the activities questionnaire.

Team members have used values clarification and communication activities as individuals and many have participated in outside activities related to drug education.

SCHOOL DISTRICT #3

An equal number of students and adults (mostly teachers) received the DARTE training. The adults were selected by the administration and in turn, they suggested students to be team members.

The training took place a little more than a year and a half ago. On the average, respondents rated their training fairly highly, but did not indicate many important aspects of training not already covered by questions in the interview.

There is a wide range of opinion about the extent of student involvement in team planning and activities. Several of the respondents reported that students were active and shared power with adult team members; several reported there was absolutely no involvement on the part of students because they did not want it; and the others just indicated that there was no involvement of students without stating reasons.

There has been a fairly high attrition rate on this team. For instance, the original team leader left the school district shortly after training and several students left or graduated at the same time.

As for activities, the present team leader reported two -- a curriculum development project and in-service training. However, some respondents indicated that they thought the team had done nothing. Perhaps these particular team members had not been active in the development and implementation of the programs described although substantial numbers of people were listed as involved in the planning and as resources.

Essentially, the team is no longer together. No future activities are planned. No released time was available last year for members.

SCHOOL DISTRICT #4

The team trained by DARTE was composed equally of students and adults. The students were selected by the counselors; the administrators were assigned by the superintendent, and, reportedly, the other adults on the team volunteered. While the adults interviewed rated the DARTE training fairly highly, the one student we were able to reach and interview did not think the training program was very good, feeling that much of it had nothing to do with drugs.

Only one respondent felt that students had real equality with the adults during team endeavors. Although no activities were reported by the team leader, the team did develop a questionnaire which they used throughout the schools to gather ideas for alternative activities to drug-abusing behavior. These suggested activities included after-school sports programs, arts and crafts sessions, a drop-in center, and after-school tutoring. The team worked these up into a proposal for the school board, but the board would not or could not consider any part of this proposal.

In effect, the team ceased to exist after this. As can be expected, the respondents rated their team's activities as having no impact on the schools or the community. They also said nothing would be different if the school district had not had DARTE training.

SCHOOL DISTRICT #5

This school district was already actively organizing a school-community drug education program when the DARTE program started. It helped contribute to some of DARTE's original ideas.

The team consisted of students, social workers, teachers and administrators. They were representatives from the committee already organized as a "task force" in the community. It included both students involved with drugs and "student-council types," and a representative of a parochial school.

Since they were already a successful working group, they were a very cohesive and committed team both during training and in carrying out their action plan. High school students seem to have participated a lot at all levels. There was a feeling that they did not exert as much influence as adults, however, and a weak attempt at involving junior high students didn't work. The team no longer exists as such, but members are involved in the mini-teams at their schools and in the newly-formed school drug education committee of the community task force, under a new chairman.

The leader was chosen by the deputy superintendent because she had proposed the original model for the task force and helped design it.

The main activities of the DARTE team that stemmed from DARTE training were two junior high workshops with seven and ten adult-youth teams participating from seven and ten junior high schools, respectively. These activities were considered somewhat successful.

The mini-teams that resulted from the workshops are just beginning to develop their activities. We were not able to obtain much information about the plans of the mini-teams. There has been a rap place established in the community, partly because of the DARTE influence, but an attempt to get recreation ideas from the people was not carried out because of a lack of community support. Another activity resulting in part from DARTE training was a pilot values

clarification workshop, which was a school activity using school funds.

The team members use values clarification and communication techniques as individuals, participate in outside activities relating to drug education, and in general, were quite enthusiastic about what DARTE is doing.

SCHOOL DISTRICT #6

This school district received its training summer before last. The original group to receive training appears to have been selected by administrators. According to the team leader, only one-sixth of those now on the region "drug team" are those who have received DARTE training. Evidently, there are school building teams, at least within the high schools.

The team members interviewed rated their training by DARTE very highly. Important aspects of training named included: helping programs in their formative stages, good resource material, and values clarification. Several respondents had gone to comparable training sessions elsewhere and thought that they were also helpful. Evidently, similar training took place, although the time span was longer.

As the team leader said she was too busy to fill out questionnaires about activities the team had conducted, it is hard to evaluate the activities here. They have evidently had in-service training sessions, workshops, and have established raprooms in the high schools. The two student

respondents especially seemed rather ill-informed about the activities of the team. Furthermore, although adults said students had been involved, with equal decision-making power, at all phases, the two students interviewed said they had been to no team meetings. Future plans of the team seem to be contingent on the allotment of money. The team leader and other respondents felt that for this district at least, a full time coordinator was needed in order to get things going. It is evident that a drug education team is still active in the district as they have monthly meetings and, at the time of our survey, new students were to be added to the team.

SCHOOL DISTRICT #7

The team from this district had their training about a year and a half ago. Many of the original trainees are no longer involved, including the few students. The latter had been brought into the team by teachers, who, reportedly, volunteered for participation, as did the other adult members of the team. After the DARTE training, a number of other adult school personnel became interested and attended team meetings.

The respondents rated the training they received from very good to excellent. However, several suggestions for improvement were made. One was to have more administrators involved in training, and another was to include more exposure to problems that could occur back at the schools.

Although one of the co-team leaders reported that the team meets weekly, only a couple of small-scale activities have been the result. According to the respondents, the team has been unable to get released time or funds to get into more extensive projects. Activities reported were the distribution of printed matter for middle school teachers, and small seminars with students from both the junior and senior high school grades. Larger workshops were planned but not carried out, due to lack of funds. At the time of the interviews, the team was awaiting word on permission to get released time one afternoon a week -- all other activities were being held in abeyance.

SCHOOL DISTRICT #8

The original group trained by DARTE was pretty evenly divided between adults and students. However, since the training occurred (over a year ago) students have dropped off the team and the team leader named a number of adults throughout the school district as being new team members. On the average, the respondents rated their training as moderately good.

It appears that students never really got involved with the team and its activities after the training was completed. Although the team met at least monthly last year, they have conducted no activities although the four or so active members did talk at various schools in the district. Student/teacher/parent workshops were planned but

money was not available to conduct them. They are still planning to try the workshop idea on a modified scale, asking for released time, but no extra funding. This team has experienced difficulty getting time to present their plans to the school board.

SCHOOL DISTRICT #9

Evidently the team in this district was trained quite a while ago. Although there is a group still meeting, there has been a high attrition rate. The original team leader was unavailable for interviewing. As a result, little information was obtained as to how the original group for training was selected. We did learn that some of the adult members were interested volunteers.

The present team leader was elected by the group last year. It seems that students were not involved in the team activities or meetings last year. The new people attending meetings have either had no outside training or some other program of training. The respondents, who all had undergone DARTE training, rated this training fairly highly.

The one activity reported by the present team leader was a workshop for parents in the community. Another workshop was planned but not carried through. One respondent said that there has been a raproom. The adult respondents felt that the team's activities have had some impact on the schools but the student respondents were less sure of this. Future plans include circulating drug information out into

the schools and speaking to PTA groups, although the team had not yet met during the current academic year.

SCHOOL DISTRICT #10

The team that went through the original training consisted of three teachers, a social worker and three students, all chosen on the basis of interest. Since then the original student members have either become inactive or graduated. Four adult team members were selected to attend additional training sessions, and others, including two students, have participated in DARTE workshops without having gone through the training. The region now has a larger drug abuse committee, which includes the DARTE-trained staff.

The team members interviewed were generally very positive about their team, their training and their activities. The only problems reported were funding and bureaucratic red tape. The administration is reported to have a positive attitude towards the DARTE program.

The first chairman of the team was a student and the two students who came to meetings participated a lot and initiated a rap group. Later on they became discouraged by the immobility of the team. It is not clear why there are no students presently on the team; no students could be contacted for these interviews.

The team leader was elected and the team met monthly and sometimes weekly the first year. They do not seem to be very active this year.

The only activity carried out as a team was a regional workshop (rated very successful) which trained four-six adults and youth from each junior and senior high school and three adults from each elementary school, selected on the basis of interest. Thirty-six small teams were formed, one in each school, and they have not yet carried out any activities, but plans have been made for a pilot program (organized by the DARTE team leader) which will give the teams an idea of what activities would be best to pursue. They are awaiting an O.K. for a drug education day, which presumably is the pilot program mentioned above. They are also establishing a drug information library.

One respondent reported a decrease in drug use and abuse as evidence of DARTE's impact.

There do not seem to be any plans to include the community directly, although parents seem to have attended the workshop described above.

SCHOOL DISTRICT #11

This team was originally made up of two teachers, four students and a social worker. The informant didn't know how the students were chosen. The team leader's name was submitted for membership from the central administration and that person was elected leader; the original leader had

dropped out. An administrator came into training later on because of interest. It was not known how the social worker got on the team, but he did not attend the second half of training. Six people who did not go through training were later added to the team by the administration.

The team met twice monthly the school year following training. It has not met yet this year but has plans for a meeting in the near future.

Students were actively involved during training and the first few sessions when the curriculum was set up, but did not attend the final meetings.

The team sent proposals to the school board but were not given any funds to set up their planned programs, so the plans could not be implemented. The school board set up guidelines for all those interested in doing drug education in the district. This apparently had a negative effect not only on the DARTE team but on other non-DARTE drug education committees in some schools.

SCHOOL DISTRICT #12

This team consisted of four students, a counselor, a social worker and two teachers. They were chosen by the school principals after they were sent a letter; the final selections were made by the superintendent.

The team members interviewed rated the training sessions fairly highly. One was not sure if any students had been to the sessions or not.

The team met two weeks after a spring training -- twice before the school year ended. They had a summer workshop, then met in the fall (about twenty-five times) and had a January workshop. After that they met about six times, but were not able to get much done.

The team did in-service training for parents, teachers and students on a district-wide basis. This was planned and carried out by the adults, apparently, though students participated in it. They also had a leadership workshop to train mini-teams for each of the schools in the district and a panel on teenagers and drugs in the community. The students were very much involved in carrying out these last two activities, but not much involved in planning them. One reason for this was that new students joined the team and others quit. One respondent was under the impression that the membership of the DARTE team consisted of just three adults. There has been a lack of communication between the mini-teams and the main team (which has not met since January). We were not able to get a clear picture of the activities of each mini-team, but many have encountered problems with their principals and administrations, and two of the six mini-teams couldn't get started because they could not get enough "teacher power." One of the more successful mini-teams has set up alternatives such as a nurse's aide program and a "survival room." Two have set up education programs. There were problems with lack of funding from the district and apparently the administration did not want

the DARTE program, partly because they did not feel included. The team felt very ineffective in approaching the community and perceived parents as not interested in becoming involved. At this point the DARTE team has "lost all enthusiasm," according to one respondent.

SCHOOL DISTRICT #13

The working part of this team consisted of four to seven adults -- teachers, counselors and social workers. Apparently some students went through the training sessions but either became uninterested or were not contacted about meetings that took place afterwards. One student was reportedly active at one or two meetings, but he has graduated. The members of the team apparently volunteered after hearing about the program in an announcement from the administration. There was no actual team leader, but the more available team member did more talking to groups.

The team went through a spring training, met a few months or weeks later and sporadically after that. They have not met this "semester." The ratings of the DARTE training sessions were mixed, but mostly favorable.

Team development has been hindered by a lack of administrative support. Teachers can't get released time, and there is not enough money to pay stipends to students and parents, who would not otherwise participate. Interest has declined and the team is fairly inactive now.

The team carried out some workshops, totalling ten hours. Four of these were for the P.T.A. They used mostly large group discussions and lectures in these workshops, and brought in outside experts. They had planned an in-service training activity and follow-up for an in-service at the junior high, but could not get funds for stipends and custodial services.

Team members use values clarification and communication activities as individuals and some participate in outside activities related to drug abuse education. The team is expected by the administration to take their problems to the federally funded drug abuse center in the community.

SCHOOL DISTRICT #15*

This team went through DARTE training over two years ago. The ratio of students to adults trained is approximately one to two. The team leader was chosen by an administrator and other adult team members were also selected by administrators. Careful consideration was given to balancing the team by race and sex when the selections were made. Students were recommended by teachers with the criteria that they had some experience with drugs and would be good in relating to other students. It appears that there was another person who served as team leader before the respondent interviewed as team leader; evidently he is no longer with the school district.

*There was no District #14 in the original numbering, and since that numbering was used throughout the analysis of these data, it has been maintained here.

The respondents' ratings of DARTE training varied from poor to excellent; the speakers were praised. Although the team met a week after the completion of training, no regular meetings were scheduled for the group. Members felt that the school district did not support the team. Evidently, parallel programs came into existence in the district shortly after the DARTE training. Some of the DARTE-trained high school students got involved in a community-funded drug center.

The team leader did not return the questionnaires for activities so the information on them is sketchy. Apparently, the team broke into subgroups and went into each high school classroom and talked about drug education. One respondent indicated that the high school student team members were thoroughly involved in this, but another said that they did not have an equal voice in planning although they did participate. A planned weekly program at the elementary level was never carried out.

SCHOOL DISTRICT #16

This school district underwent DARTE training about a year and a half ago. The school district had a committee established consisting mainly of administrators who were interested in drug education and whose members were involved in the initial selection of the team members. Apparently, student volunteers were selected by principals and the student government. Teachers volunteered and were then

screened by students, and other adult team members were involved because of the relevance to their work.

The inclusion of students was seen as an important aspect of training. According to the respondents, students have been involved in all aspects of team work: planning, school building teams, and implementation of programs.

Team members rated the DARTE training from pretty good to excellent. On the whole, they wish there could be more follow-up with the DARTE staff, especially for facilitating new activity.

Activities conducted by the school district team covered both curriculum changes and a thorough in-service training series, including training of new trainers. The impact of these activities was rated fairly high, although the effects have been primarily on teachers and the school program, rather than on drug abusing behavior itself. (However, one respondent feels that there is less drug abusing behavior on school grounds than in the past.) Values clarification is particularly lauded as an effective technique which has been passed on to others. All of the respondents from this school district had positive things to say about their own personal development resulting from training.

SCHOOL DISTRICT #17

Students made up one-third of the team which received training from the DARTE staff about a year and one half ago. They were selected by the team's teachers and by an

administrator. Some of the adult members of the team were chosen because their jobs did not require the use of substitutes; others volunteered; and still others were selected by administrators. All the respondents had high ratings for their training experience. Several mentioned the mixing of school district personnel as being a very important aspect of training, while another said that knowledge concerning the needs of drug abusers was very helpful. All respondents reported being highly committed to working on their district's action plan developed during training.

Student involvement was described as being mainly "advisory." Students did participate in the presentation of the program to the school board but did not serve as resources for the two activities undertaken by the team.

These activities were very similar to the type of program that the DARTE staff itself uses. The in-service program was brief but reportedly highly successful and the second activity which focused on classroom teaching was also rated highly. A planned, more extensive in-service program was not carried out because funds were unavailable. The team still has hopes to carry out this activity.

Communication appears to be a problem for this team; apparently no regular meetings are held and respondents don't agree with each other about the frequency of meetings. In addition, lack of money for activities was mentioned by several respondents as being a major problem.

SCHOOL DISTRICT #18

This team consisted of students, parents, teachers, and one administrator (the self-selected leader) who selected two students from the high school, while counselors selected two students from the junior high. The students were "responsible" non-drug users. The parents had been involved with the youth center and were selected by the team leader. The teachers indicated their interest in drug education and were selected by the principal.

The team members interviewed generally rated the training sessions highly. They gave their lowest ratings to the questions on alternatives to drug abuse and did not seem to be too affected by the communications activities. They have all used values clarification personally and there were three comments on the usefulness of the drug information.

The students seem to have been involved on an equal basis with the adults during the training sessions, where they broke into four sub-groups with one student in each, and also at the three meetings they have had since training.

The team leadership was unclear and ambiguous. One informant said there was no team leader and that everyone had equal responsibility for the program, while another said that people looked to another member of the team for leadership. Respondents varied in their evaluation of this diffusion of leadership.

The team has not yet carried out any activities as a team, but a survey is being planned (the students' idea,

apparently). One of the members has presented the plan to the school board and received favorable comments, but the board wants to know more about it before they make a decision. That same member has incorporated the DARTE process into a drug education section of her science class.

SCHOOL DISTRICT #19

Parents, students, teachers, counselors, and administrators were on this team. One student and one parent dropped out after two years. Team members volunteered after announcements were made to the school and the final choice of students was made by an administrator, the self-appointed team leader.

The ratings of training were fairly high. Members interviewed were fairly highly committed and used values clarification and communications activities as individuals. Two participated in outside activities related to drug abuse education.

There was some lack of rapport among members of the team and some criticism of the way the students were chosen and of the effectiveness of the leadership in bringing the group together. The main factor felt to affect the development of the team was lack of support from the community and from the administration.

The team carried out successfully three of their four planned actions. One, considered very successful, was a series of three, three-hour sessions for parents and students

at night. Films and small group discussions were the main methods used. There was a values clarification program one week for grades seven to twelve which totalled nine hours, and a drug abuse workshop for grades seven to twelve which ran twelve hours in one week. These activities were considered somewhat successful. An attempt to get a curriculum planned failed, due mainly to lack of teacher interest.

Opinions varied on impact from "none" to "this is the best year...seen at this school."

SCHOOL DISTRICT #20

This team was made up of one administrator, four students, two counselors (one was replaced by another later on), and an elementary school teacher. The students were chosen by counselors. One informant did not know how the teacher was chosen and the other said there were no teachers on the team. The counselors were chosen by the curriculum coordinator (a team member and functional, though not nominal leader). The leader was chosen by consensus. Participating parents were referred to the team by the principal.

Team members interviewed rated the training favorably and some of them use values clarification and communications activities as individuals.

Apparently the curriculum coordinator called together about three meetings, but only the other counselors went to the meetings. The teacher said that the "chairman never called any meetings." The students were "too busy and not

interested." The curriculum coordinator arranged for a "drugmobile" to visit the district and organized an in-service training session (mostly drug facts) which lasted six hours one day and was aimed at one hundred-fifty teachers and some administrators, counselors and parents. It was rated very successful. An hour long P.T.A. program involving mostly parents was done, and a drug education curriculum has been instituted in the seventh and eighth grade science and health classes (mostly drug facts). These last two have had something to do with motivating the principal to get things done. One respondent reported that a "clinic was opened for drug problems, but nothing was really instituted." (Nurses started this program, but evidently not enough people utilized the service to make it worthwhile.) Some students in the high school have put on a play (running forty-eight minutes) about drugs and have given it to two classes and a group of parents.

As evidence of impact such things as posters on the bulletin board, film and student workshops (elementary school) and a drug/ecology/biology group were mentioned. What drug education activities have been carried out seem to stem from other groups and not the DARTE-trained team.

SCHOOL DISTRICT #21

Collecting information concerning the DARTE team in this district was difficult. The team apparently was very hastily put together. The school that the training program

was to be held at had not been informed of the program and someone rounded up teachers who were in the hall to go. The principal of another school apparently asked for some teachers to volunteer. A counselor was asked to go because of his previous involvement in drug education. One school asked for student volunteers. Three went and quit after the first week. "Either they just weren't interested or had other things to do... there was a lot of student apathy." The team leader did not personally know any of the students.

The adult team members who went through the training apparently benefited personally from it, but were not highly motivated to carry out any drug education programs. They did meet a total of about twelve hours to plan a curriculum -- mostly audio-visual -- to be included in the tenth grade gym classes.

This class was "dispersed due to parental pressure on the administration which caused a lack of support. I understand one parent caused this."

There apparently were political overtones to the stopping of this program. This relatively conservative community had been very upset the year before when it was discovered that sexual activity and drug dealing were going on after hours in the rap center which had been opened. The police closed it down and the community has been very opposed to drug education ever since.

One respondent had this to say: "Maybe it's just apathy on all our parts. Frankly, this problem is down on our priority lists. We find it easier to just kick these kids who are habitual trouble-makers out of school than to help them. Our scape-goat is the financial situation," which in reality is quite serious.

Three people refused to be interviewed but one did supply some information. One said that we should come there and talk to the people who stopped the team. Another had the impression that, "We're up to our eyeballs in drug education."

SCHOOL DISTRICT #22

This team had students, administrators, a counselor, a nurse and teachers in its membership. The assistant superintendent of schools apparently selected the students, teachers, and administrator, after being directed by the superintendent to do so. The nurse and counselor were picked by the superintendent because of their jobs; students chosen were those most heavily involved in drugs who were willing and recommended by teachers. The superintendent appointed the team leader on the basis of her involvement with matters concerning the students' personal lives. The administrator was changed to another school just as the team meetings got started.

The training sessions were generally rated highly, but most interviewees did not feel enthusiastic about the drug

abuse alternatives presented. The interviewees all use values clarification and communications techniques in their jobs or in community drug counseling, and three of the respondents participate in drug education activities outside of DARTE.

The team was trained in the spring and had only one meeting before the end of the school year. They never carried out any activities. They appeared to be very enthusiastic right after DARTE training, but were apparently not allowed to do anything. The board turned down requests for money, materials and curriculum changes and did not even allow them to report to them on their DARTE program. The only drug education that has been done was a "shot-gun approach assembly" which "by-passed the trained staff." Opinions concerning issues which affected the development of the team negatively included feelings of teacher apathy, poor selection of students, unrealistic goals, lack of participation and/or support from city officials, and lack of funds.

All but one of the interviewees believed students were quite involved, but the team only had one meeting after training after which school let out and most of the students on the team graduated. One respondent felt the choice of students was poor.

This community is seen as being relatively apathetic about the drug problem.

SCHOOL DISTRICT #23

The original DARTE-trained team from this school district had an approximately equal number of students and adults. Since the team no longer exists as such, it was hard to obtain information about the composition of the team during its active period. It appears that the leadership of the team was changed several times, with an administrator and a student as co-chairmen at first, then a social worker who left the school system, and lastly the administrator again (who had not been through the entire DARTE training and delegated leadership to a counselor who had been through the training).

Most of the students on the original team had been selected by a teacher in the high school. It appears that the high school teachers volunteered to be on the team, while the few elementary school teachers were chosen by the principal. The counselor volunteered his participation. In general, the respondents, who had all gone through DARTE training, rated the information given and training activities favorably.

The main thrust of activities occurred in the spring following training, which occurred in the fall. An extensive action plan developed during the training consisted of about forty separate activities, of which about ten were actually implemented, mainly those not involving large expenditures of funds or extensive changes in the philosophy of the school district. One team activity was selected by

several informants as having a negative effect on the development of the team. This was an information program for the community, after which the team never met alone again, but was joined by community members (mostly parents). Opinions about this program ranged from thinking that these meetings were held too soon, to stating that too many people got involved so that team cohesiveness was lost, to believing that this activity was somewhat successful.

There was little activity last year (1971-1972) in any drug abuse reduction efforts in the schools. Several of the people, both students and adults, who had been trained by DARTE, are active in other drug abuse reduction programs such as local drop-in centers.

As the team had no real authority to implement programs, i.e., spend money, make real changes in the curriculum, etc., the impact on the school district was rated negligible by the respondents. There was some feeling that there is a more humanistic approach to students throughout the district due to the program.

The aforementioned community information program brought more adults into the meetings. On the whole, respondents were dismayed at the results of this. Reportedly, many students and teachers became disinterested due to long meetings without results which developed from these additional people attending the meetings who had not had DARTE training. A community action group developed from this which dissolved in the spring following the training.

SCHOOL DISTRICT #24

In this district, the student team members were chosen by the team leader for their ability to communicate with others. No teachers were on the team (because that would necessitate substitutes); and the adult members were selected by the administration. At the time the DARTE training took place, about a year ago, the team leader had a job with the district which made her the ideal liaison person. An equal number of students and adults were trained and everyone rated the training very good to excellent.

It must be noted here that the team no longer meets/ exists due to financial problems of the district. Several adult team members have been reassigned from key liaison-type positions so that they could no longer be as effective.

All the respondents reported that students worked together with the adults and had equal power. Team development, evidently, was very good, with close relations among the members until the school district's funding problems kept them from further activities.

The one activity reported by the team leader was an extensive in-service program, focusing on curriculum change, and all respondents agreed that it was very successful. Also a humans relations class has been added to the curriculum as a direct result of the DARTE-trained team. The main impact the respondents reported was on the teachers; they felt they were more compassionate and that they were enthusiastic about the program and implementing ideas passed on to them.

Several team members are involved in outside activities.

SCHOOL DISTRICT #25

There were students, teachers, counselors and a social worker on this team. The students were chosen by teachers, the teachers and counselors by principals; everyone was a volunteer. The superintendent asked the social worker to be on the team. Previous programs had been led and initiated by the leader, which was why she was appointed leader.

The programs prior to DARTE were in-service training, guest speakers and a curriculum for grades kindergarten through eight.

The team was slightly favorable in their opinions of the training, and at the end of the training they felt quite enthusiastic and committed. Students participated a lot but did not seem to have equal power.

The main activity of the team was in-service training for students, teachers and some parents which ran four weeks, three hours a week, and trained one hundred-seventy people. They were also able to put through a guideline for a policy of confidentiality of relationship between school personnel and students.

The team also planned an alternatives day and student lounges, but were unable to carry these plans out because of lack of support from the administration. They do have alternative activities going on during the lunch hour. The lack of administrative support led to the disintegration of the

team. People lost interest and enthusiasm and stopped meeting; however, a new team is in the process of formation this year.

SCHOOL DISTRICT #26

Students made up one-third of the original team trained by DARTE in this school district. They were chosen by the team leader from the student council. Teachers and administrators who volunteered and were then selected by the administration made up the rest of the team. All of the respondents rated their DARTE training in a range from very good to excellent. As one respondent said, "We learned that facts really weren't the most important thing at all. The idea that a variety of natural alternatives can be used as a high was very important."

Respondents reported that students were involved only to a limited extent. While they helped plan parts of the program, they were not involved in its implementation. Several respondents reported that a teacher/student status differential inhibited team development and that students presented ideas but were excluded to some extent. It appears that the team was divided also on issues, and grouped itself around types of schools (elementary, middle, and high schools).

Activities were conducted soon after the fall training of this team two years ago. These included a curriculum development series, in-service training, and a workshop. Overall, these were considered successful by the respondents.

One respondent gave as an example of impact on the schools the following statement. "The attitudes of team members have influenced for the better the attitudes of other adults in the schools." All the respondents felt that their team's activities had had at least some impact on their schools and several rated the impact higher than that. One activity was reported for the last school year, a series of in-service meetings held in the evening. Team members seemed to feel that these sessions were not particularly successful.

SCHOOL DISTRICT #27

This team consisted of students, teachers, an administrator and a counselor. The principal picked interested teachers. The team leader chose the high school students, trying to vary grade, race, sex, experience with drugs, and academic achievement among them. It was not possible to ascertain how the junior high students, administrator, or counselor were chosen.

This team went through training in the winter. The four interviewees we were able to contact were fairly critical of the training. They liked the empathy training and the opportunity to get expert advice, but felt there was too much lecture and not enough meeting as teams, values clarification, or communication activities. One said the training was too structured. Members of the team lacked the time, commitment and rapport necessary for carrying out

activities and consequently did not pursue any or have any meetings. The leader was not aware that she was the leader and was very committed to other kinds of communication and community-school relations programs. The general feeling was that the DARTE training was a waste of time for this team.

There had been an attempt made by an administrator to put drug education in the curriculum before DARTE training began, but no one had the energy to carry it through. Two DARTE team members did attend a Wayne State University drug course for elementary and secondary teachers. The interviewees use values clarification activities and communications techniques as individuals and one participates in an outside activity which involves drug education.

SCHOOL DISTRICT #28

A majority of the people from this team who went through DARTE training were students. They were selected by a teacher who, like the other adult members of the team, was picked by a school district administrator.

The DARTE training for the team took place very recently. On the whole, this team rated their training by DARTE very highly, although several respondents had complaints as to the pressure put on participants to get so much done within a tight schedule. Student involvement in team activities was rated high by both adult and student respondents.

Activities carried out so far include both one directed toward curriculum changes and one with the emphasis on training of personnel. The respondents generally thought these programs were successful.

From the data gathered, it is apparent that the original school-based team has evolved into a group focused on the overall community. The future plans for this group include the establishment of a crisis center, as well as the development of alternatives. They meet monthly and students are involved in this new organization, now headed by a parent from the community. Not everybody in this group believes that students can handle the responsibilities involved, however, so the degree of student participation in the future is difficult to predict.

SCHOOL DISTRICT #29

The team from this school district had its training fairly recently. Team members apparently were selected from a committee on drug education which was in operation in the school system already. The team leader is now titled "consultant for drug abuse" but considers himself a counselor, although he was a teacher at the time of the training. Several students were recruited by counselors. The respondents consistently reported equal student involvement in planning and shared power among students and adults. However, there were indications that students felt uncomfortable in serving as resources to adults in training situations.

The respondents' evaluation of their DARTE training ranged from highly enthusiastic to quite critical. Some important aspects of training identified by this group included: the idea of having drug education programs for parents; learning how to organize themselves; the resources and materials distributed; and the chance to interact with persons from other school systems while in training.

The one activity the team has carried out, a one-day workshop in school, was rated as having an impact on the school district. The team met often while planning this activity, but does not hold regularly scheduled meetings, although they intend to do so. The team plans to expand on in-service training including more of the DARTE process in the future in order to develop a philosophical base for their drug education efforts. They are also planning to have a national figure in drug education for a day and a half during this training. They hope eventually to include all secondary and elementary teachers in their training program.

APPENDIX G: DESCRIPTIVE STATISTICS FOR DARTE TEAMS*

| | content | N | mean | Std. Dev. | range |
|---|---|---|---|---|---|
| 1) | respondents' years in school district | 28 | 15.04 | 8.67 | 1-29 |
| 2) | accuracy of DARTE's information about drugs (9) | 28 | 4.46 | .43 | 3.3-5.0 |
| 3) | accuracy of DARTE's information about legal aspects of drugs (10) | 28 | 4.13 | .53 | 2.8-5.0 |
| 4) | accuracy of DARTE's information about social aspects of drugs (11) | 28 | 3.76 | .56 | 2.5-4.7 |
| 5) | helpfulness of DARTE staff (12) | 28 | 4.46 | .41 | 3.6-5.0 |
| 6) | usefulness of values clarification (13) | 28 | 4.02 | .50 | 2.8-5.0 |
| 7) | usefulness of communications activities -- personal (14) | 28 | 3.54 | .55 | 2.0-4.3 |
| 8) | usefulness of communications activities -- team (15) | 28 | 3.79 | .46 | 2.8-4.8 |
| 9) | usefulness of training to work with others of different backgrounds -- personal (16) | 28 | 3.71 | .51 | 2.7-5.0 |
| 10) | usefulness of training to work with others of different backgrounds -- team (17) | 28 | 3.83 | .52 | 3.2-5.0 |

*For each variable, a brief description, the N, mean, standard deviation, and range are given. Where applicable, the number on the interview (Appendix E) will be given.

| | content | N | mean | Std. Dev. | range |
|---|---|---|---|---|---|
| 11) | personal helpfulness of training in alternatives to drugs (18) | 28 | 2.80 | .76 | 1.5-5.0 |
| 12) | team could develop alternatives to drugs in community (19) | 28 | 2.33 | .70 | 1.0-3.7 |
| 13) | personal commitment to action plan (22) | 28 | 4.04 | .59 | 3.0-4.8 |
| 14) | team commitment to action plan (23) | 28 | 3.53 | .65 | 2.2-4.6 |
| 15) | degree to which team used DARTE process in training others (24) | 28 | 2.82 | 1.07 | 1.0-4.6 |
| 16) | degree of felt competence in using values clarification (25) | 28 | 3.68 | .45 | 2.8-4.4 |
| 17) | degree of felt competence in using communications activities (27) | 28 | 3.76 | .51 | 2.8-4.6 |
| 18) | team felt competent in locating and using resources (29) | 28 | 3.78 | .63 | 2.3-4.8 |
| 19) | satisfaction with leader at end of training (30) | 28 | 4.00 | .56 | 2.7-4.8 |
| 20) | effectiveness of leader since training (31) | 28 | 3.11 | .76 | 1.6-4.0 |
| 21) | seriousness of drug abuse problem (38a) | 28 | 3.84 | .51 | 2.8-4.6 |
| | (items 22-31: 1=much less than other Wayne County communities...5=much more than other Wayne County communities) | | | | |
| 22) | overall drug problem (39) | 28 | 3.11 | .54 | 2.0-4.0 |
| 23) | extent of narcotics use (40) | 28 | 2.78 | .74 | 1.5-4.0 |
| 24) | extent of alcohol use (41) | 28 | 3.25 | .37 | 2.5-4.0 |

| | content | N | mean | Std. Dev. | range |
|---|---|---|---|---|---|
| | (items 22-31: 1=much less than other Wayne County communities...5=much more than other Wayne County communities) | | | | |
| 25) | extent of hallucinogen use (42) | 28 | 2.55 | .62 | 1.5-3.7 |
| 26) | extent of amphetamine use (43) | 28 | 2.85 | .41 | 2.0-3.7 |
| 27) | extent of barbiturate use (44) | 28 | 2.99 | .51 | 2.0-4.4 |
| 28) | extent of marijuana use(45) | 28 | 3.48 | .41 | 2.5-4.3 |
| 29) | average income in community (46) | 28 | 2.99 | .88 | 1.6-4.5 |
| 30) | extent to which drug problem dealt with publicly (47) | 28 | 2.58 | .54 | 1.5-4.0 |
| 31) | availability of drugs (48) | 28 | 3.52 | .43 | 2.8-4.5 |
| | (items 32-49: 1=much less than before...5=more than before) | | | | |
| 32) | overall drug problem relative to one year ago (50) | 28 | 3.27 | .53 | 2.3-4.4 |
| 33) | overall drug problem relative to two years ago (51) | 28 | 3.40 | .55 | 2.3-4.4 |
| 34) | narcotics use relative to one year ago (52) | 28 | 3.40 | .61 | 1.7-4.3 |
| 35) | narcotics use relative to two years ago (53) | 28 | 3.32 | .66 | 2.0-4.3 |
| 36) | alcohol use relative to one year ago (54) | 28 | 3.60 | .44 | 2.8-4.4 |
| 37) | alcohol use relative to two years ago (55) | 28 | 3.62 | .46 | 2.6-4.4 |

| content | N | mean | Std. Dev. | range |
|---|---|---|---|---|
| (items 32-49: 1=much less than before... 5-more than before) | | | | |
| 38) hallucinogen use relative to one year ago (56) | 28 | 2.85 | .47 | 2.0-4.3 |
| 39) hallucinogen use relative to two years ago (57) | 28 | 2.84 | .61 | 2.0-4.5 |
| 40) amphetamine use relative to one year ago (58) | 28 | 2.98 | .48 | 2.0-4.0 |
| 41) amphetamine use relative to two years ago (59) | 28 | 2.98 | .57 | 2.0-4.3 |
| 42) barbiturate use relative to one year ago (60) | 28 | 3.22 | .51 | 2.5-4.5 |
| 43) barbiturate use relative to two years ago (61) | 28 | 3.20 | .59 | 2.0-4.5 |
| 44) marijuana use relative to one year ago (62) | 28 | 3.89 | .28 | 3.3-4.3 |
| 45) marijuana use relative to two years ago (63) | 28 | 3.93 | .34 | 3.0-4.6 |
| 46) community deals with problem publicly--relative to one year ago (64) | 28 | 3.17 | .42 | 2.0-4.0 |
| 47) community deals with problem publicly--relative to two years ago (65) | 28 | 3.45 | .54 | 2.0-4.7 |
| 48) availability of drugs relative to one year ago (66) | 28 | 3.54 | .31 | 2.8-4.0 |
| 49) availability of drugs relative to two years ago (67) | 28 | 3.59 | .62 | 1.0-4.6 |
| 50) impact on schools) (73) | 28 | 2.74 | .81 | 1.0-3.8 |
| 51) impact on community (74) | 28 | 2.04 | .69 | 1.0-3.3 |

| | content | N | mean | Std. Dev. | range |
|---|---|---|---|---|---|
| 52) | degree to which drug abuse caused by factors outside team's control (75) | 28 | 3.56 | .41 | 2.8-4.3 |
| 53) | team development rated by ISR | 28 | 1.54 | .84 | 1.0-4.0 |
| 54) | activities accomplishment rated by ISR | 28 | 1.61 | .79 | 1.0-4.0 |
| 55) | team development rated by DARTE | 28 | 2.57 | 1.03 | 1.0-4.0 |
| 56) | activities accomplishment rated by DARTE | 28 | 3.04 | 1.23 | 1.0-5.0 |
| 57) | training cycle (1=first ...7=last) | 28 | 3.86 | 1.96 | 1-7 |
| 58) | Drug Knowledge error change score -- interview sample | 14 | -.88 | 1.08 | -3.5-0.8 |
| 59) | Opinion Inventory discrepancy change score --interview sample | 15 | -6.31 | 4.32 | -14.0-0.5 |
| 60) | Pretest Drug Knowledge error change score -- interview sample | 14 | 7.42 | 1.73 | 5.0-10.8 |
| 61) | Pretest Opinion Discrepancy score-- interview sample | 17 | 27.37 | 5.00 | 20.8-37.0 |
| 62) | number of male students on team | 28 | 1.86 | 1.24 | 0-4 |
| 63) | number of female students on team | 28 | 1.64 | 1.16 | 0-4 |
| 64) | number of male adults on the team | 28 | 3.14 | 1.82 | 0-7 |
| 65) | number of female adults on the team | 28 | 3.32 | 1.79 | 1-9 |
| 66) | number of people on corrected team roster | 28 | 10.0 | 3.27 | 5-19 |

| | content | N | mean | Std. Dev. | range |
|---|---|---|---|---|---|
| 67) | number of people on original team roster | 28 | 10.89 | 3.31 | 7-21 |
| 68) | number of people added to the team | 28 | 1.61 | 2.78 | 0-11 |
| 69) | adult respondents' years in school district | 28 | 10.38 | 3.69 | 5-18.3 |
| 70) | local school funding; rank relative to whole state (Michigan) | 27 | 149.07 | 135.39 | 1-500 |
| 71) | student involvement (1=low ...5=high) | 28 | 2.68 | 1.36 | 1-5 |
| 72) | rating of political climate (1=conservative...5=liberal) (rating by DARTE Director) | 28 | 3.04 | .95 | 1-4 |
| 73) | "age" of district (1=old, losing students... 3-growing) (rating by DARTE Director) | 28 | 2.00 | .61 | 1-3 |
| 74) | % unemployed (1970 Census) | 25 | 5.48 | 1.73 | 2.6-8.0 |
| 75) | family income (in thousands of dollars) (1970 Census) | 22 | 11.78 | 1.96 | 8.7-14.7 |
| 76) | Pretest Drug Knowledge error score--inclusive sample | 15 | 8.04 | 1.48 | 5.4-10.7 |
| 77) | Drug Knowledge error change score--inclusive sample | 15 | -.95 | 1.10 | -2.4-0.8 |
| 78) | Opinion Inventory discrepancy change score --inclusive sample | 23 | -4.50 | 4.08 | -11.4-9.0 |
| 79) | Pretest Opinion Inventory discrepancy score-- inclusive sample | 23 | 28.24 | 3.69 | 22-35.2 |
| 80) | Community type (1=rural ...3=urban; rated by DARTE Director) | 28 | 2.29 | .60 | 1-3 |

| | content | N | mean | Std. Dev. | range |
|---|---|---|---|---|---|
| 81) | # students on whole team | 28 | 3.07 | 1.65 | 0-6 |
| 82) | # teachers on whole team | 28 | 2.29 | 1.63 | 0-8 |
| 83) | # administrators on whole team | 28 | .71 | .76 | 0-3 |
| 84) | # counselors on whole team | 28 | .60 | .63 | 0-2 |
| 85) | # parents on whole team | 28 | .18 | .48 | 0-2 |
| 86) | # nurses on whole team | 28 | .11 | .31 | 0-1 |
| 87) | # social workers on whole team | 28 | .44 | .91 | 0-3 |
| 88) | # others on whole team | 28 | .21 | .50 | 0-2 |
| 89) | average teachers' salary in district (in thousands of dollars) | 26 | 10.96 | .87 | 9.3-13.3 |
| 90) | % housing units holding 1.01 or more people/ room (1970 Census) | 24 | 8.46 | 2.96 | 3.5-15.1 |
| 91) | median age of people in community (1970 Census) | 24 | 27.3 | 3.29 | 21.3-35.1 |
| 92) | % in same household as 1965 (1970 Census) | 23 | 58.5 | 5.89 | 51-71.2 |
| 93) | % of adults age 25+ with less than high school education (1970 Census) | 24 | 51.69 | 12.13 | 18.2-71.6 |
| 94) | # students in school district, fall, 1972 (in thousands) | 27 | 14.41 | 13.49 | 2.4-34 |
| 95) | % change in # students in district from 1971 | 26 | -3.09 | 3.61 | -8.0-11.5 |
| 96) | valuation per student (in thousands of dollars) | 27 | 24.37 | 11.78 | 9.4-51.0 |
| 97) | cost per student (in dollars) | 27 | 928.22 | 134.89 | 706-1322 |
| 98) | State of Michigan aid (in dollars),per pupil | 26 | 291.5 | 135.73 | 0-529 |

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